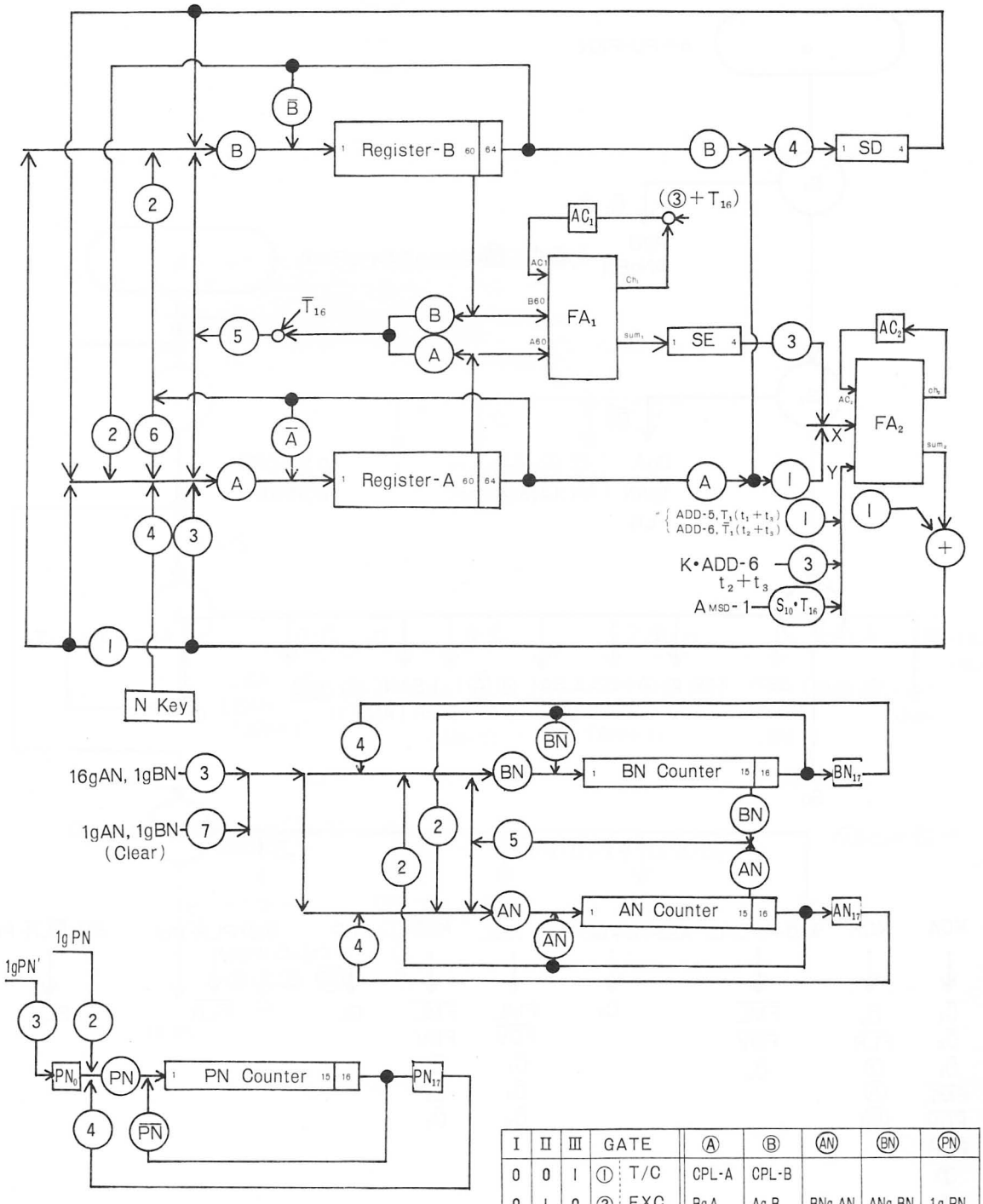
SANYO

Model **ICC-0081**

ELECTRONIC MINI CALCULATOR

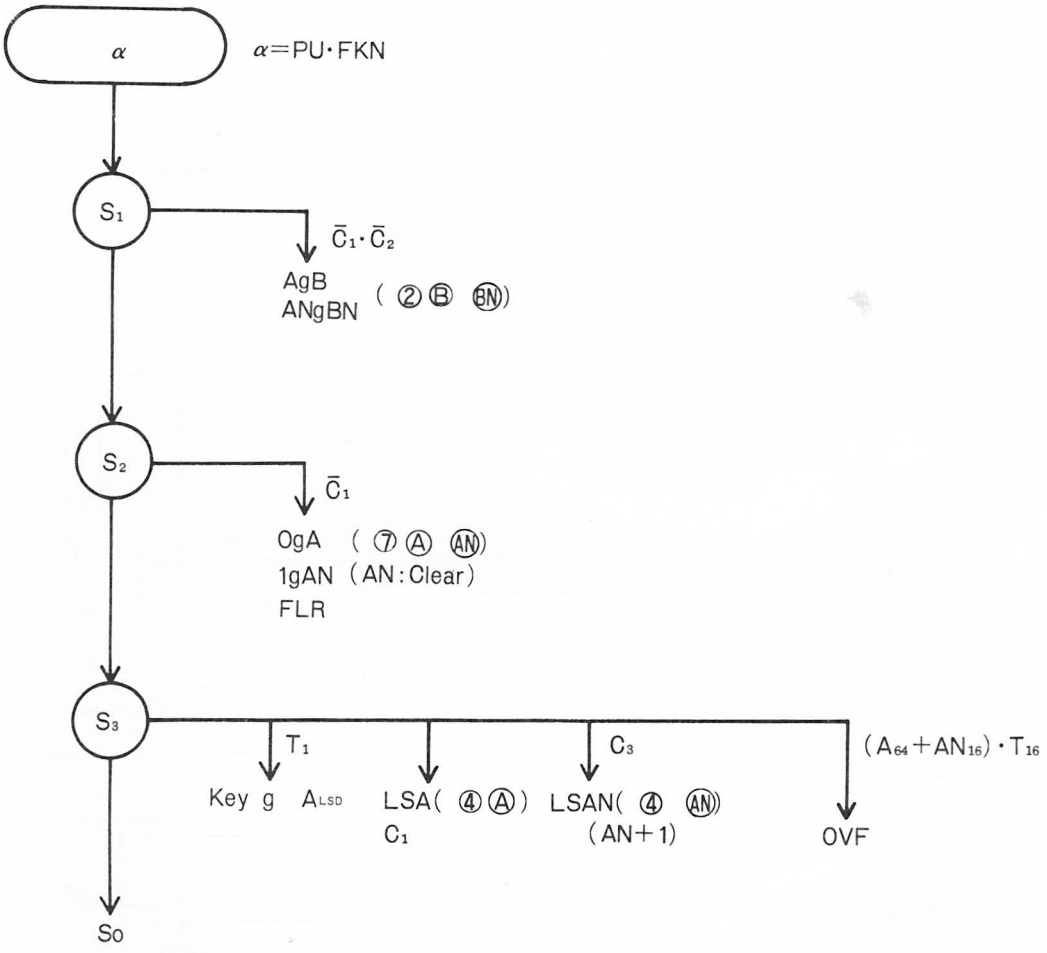
LOGIC CIRCIUT DIAGRAM

Block Diagram



I	II	III	GATE	Ⓐ	Ⓑ	(AN)	(BN)	(PN)
0	0	I	① T/C	CPL-A	CPL-B			
0	I	0	② EXC.	Bg A	Ag B	BNg AN	ANg BN	1g PN
0	I	I	③ ADD	A+B→A	CLB	16g AN	1g BN	1g PN'
I	0	0	④ LS	LSA	LSB	LS AN	LS BN	LS PN
I	0	I	⑤ RS	RSA	RSB	RSAN	RS BN	
I	I	0	⑥ DR	Drop A				
I	I	I	⑦ CLR	0g A	0g B	1g AN	1g BN	0g PN

Input Sequence



KCA → $\bar{C}_1$ $\bar{C}_2$ $\bar{C}_3$ $\overline{FML}$ $\overline{FDV}$ $\overline{FLR}$ ⑦ Ⓐ Ⓑ ⒶN ⒷN ⓅN

KCK → $\bar{C}_3$ $\overline{FLR}$ ⑦ Ⓐ ⒶN

KAD·PU·$\bar{C}_1$·$\bar{C}_2$ → $\overline{FML}$ $\overline{FDV}$ $\bar{C}_2$

KSB·PU·$\overline{FML}$·$\overline{FDV}$ → C_2

KML → FML $\overline{FDV}$ $\bar{C}_1$ $\bar{C}_2$ $\bar{C}_3$

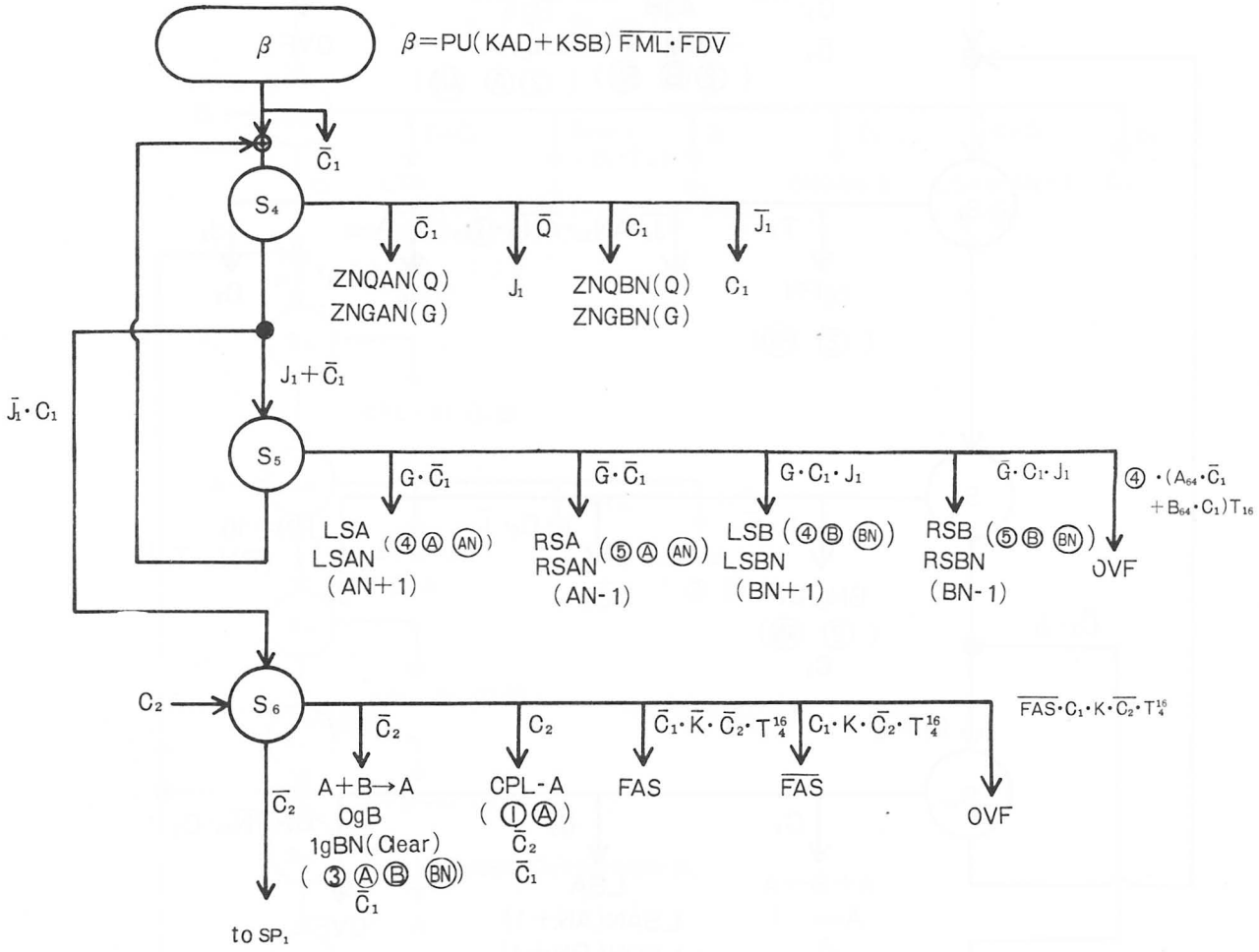
KDV → $\overline{FML}$ FDV $\bar{C}_1$ $\bar{C}_2$ $\bar{C}_3$

KDP → C_3

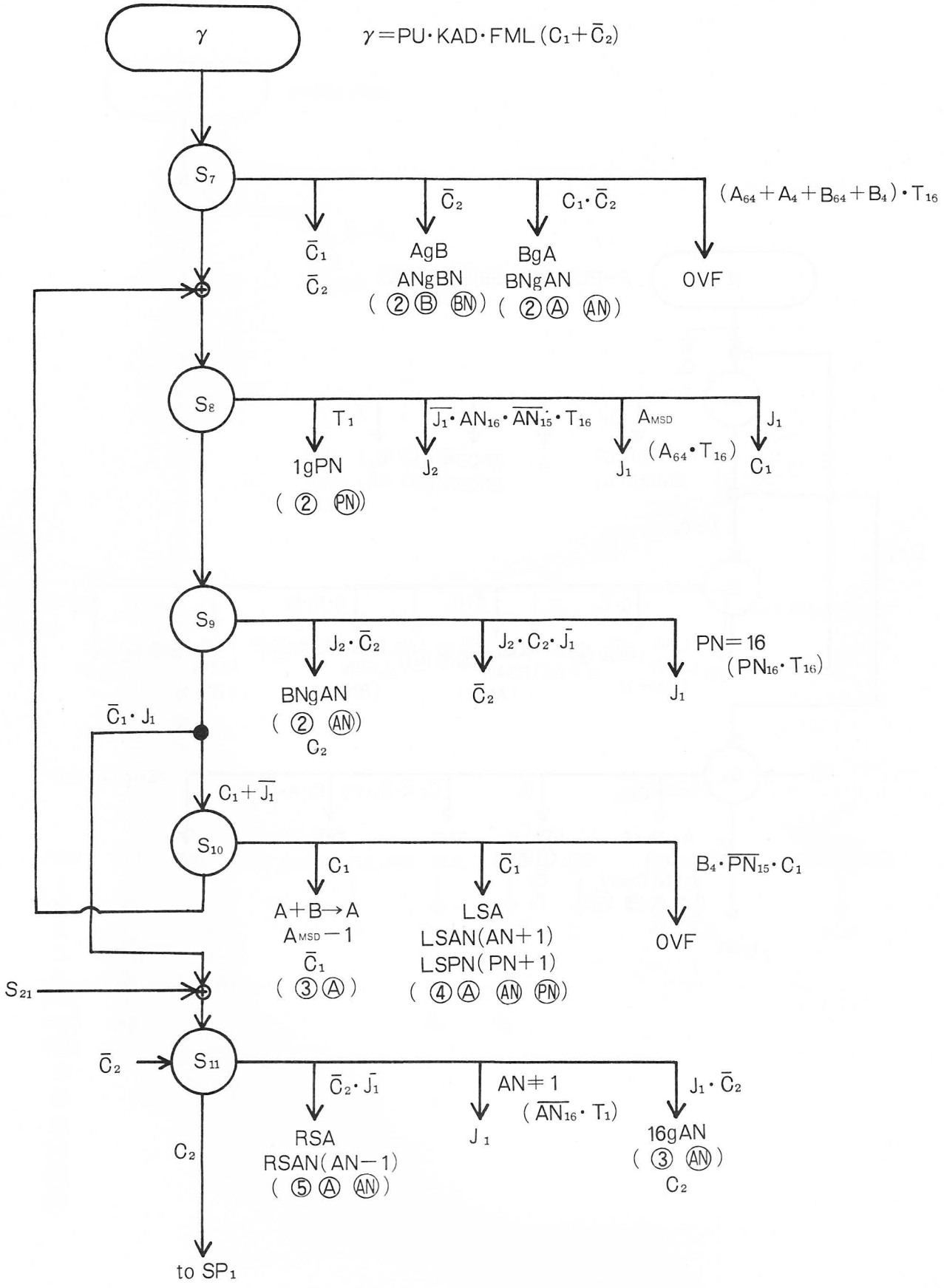
KD·FLR·PU → $\overline{FLR}$

KD·$\overline{FLR}$·PU → FLR

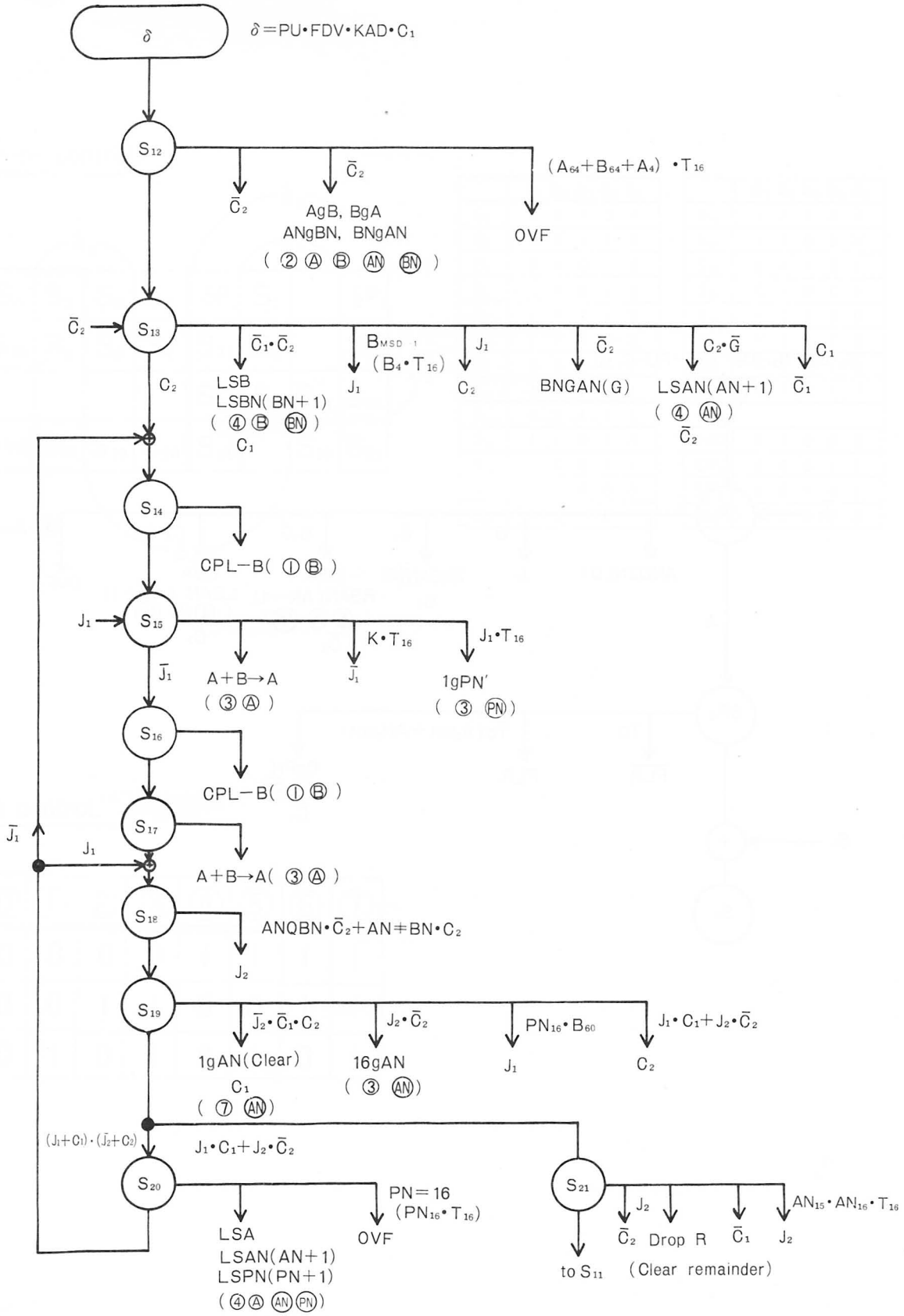
Add. Sub. Sequence



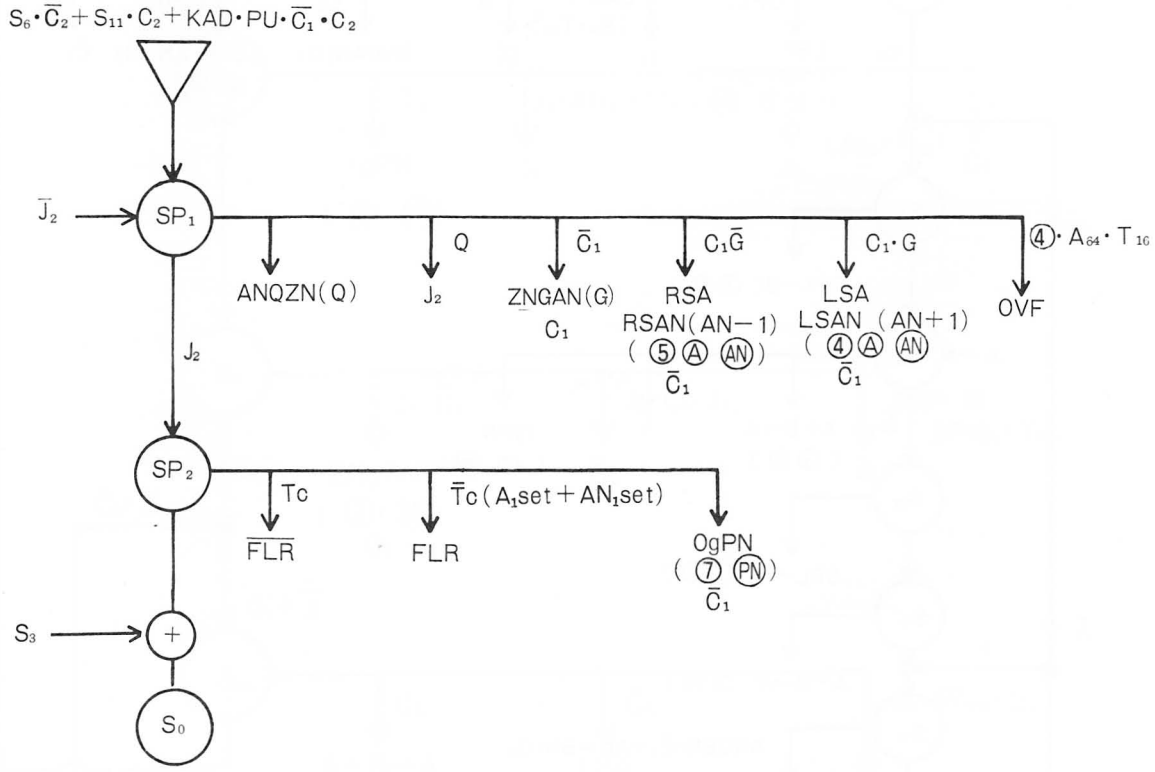
Mul. Sequence



Div. Sequence

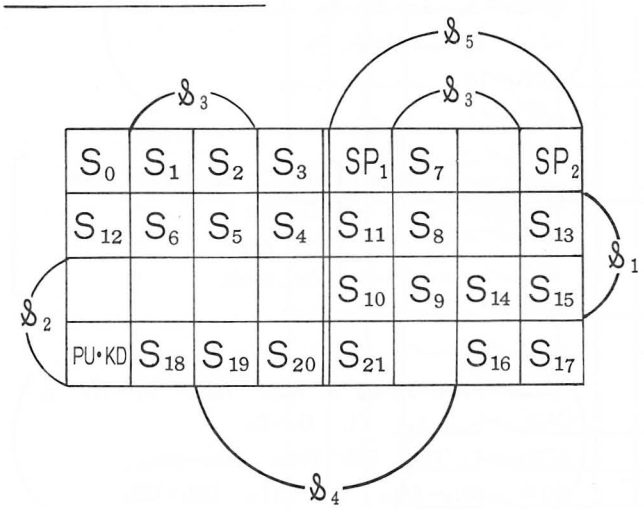


D. P. Fixing Sequence



Stage Assignment

Sequence control.



	δ_1	δ_2	δ_3	δ_4	δ_5
S_1	0	0	1	0	×
S_2	0	0	1	1	0
S_3	0	0	0	1	0
S_4	1	×	0	1	0
S_5	1	×	1	1	0
S_6	1	×	1	0	0
S_7	0	0	1	×	1
S_8	1	0	1	×	1
S_9	×	1	1	1	1
S_{10}	1	1	0	1	×
S_{11}	1	0	0	1	1
S_{12}	1	×	0	0	0
S_{13}	1	0	×	0	1

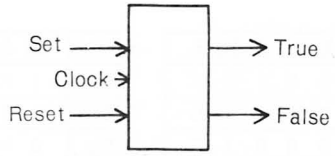
	δ_1	δ_2	δ_3	δ_4	δ_5
S_{14}	1	×	1	0	1
S_{15}	1	1	0	0	×
S_{16}	0	×	1	0	1
S_{17}	0	1	0	0	1
S_{18}	×	1	1	0	0
S_{19}	×	1	1	1	0
S_{20}	×	1	0	1	0
S_{21}	0	1	×	1	1
PU·KD	0	1	0	0	0
SP_1	0	0	0	1	1
SP_2	0	0	×	0	1
S_0	0	0	0	0	0

Gate control.

	⓪	①	②	③	④	⑤	⑥	⑦
I	0	0	0	0	1	1	1	1
II	0	0	1	1	0	0	1	1
III	0	1	0	1	0	1	0	1

Notations

✱ S−R Flip Flop

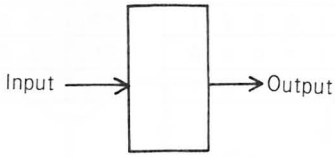


$\phi_1 = (Cp_1, Cp_3, Cp_4)$ $\phi_2 = Cp_2$

$Cp_1 = FLR$
$Cp_3 = \mathfrak{S}_1, \mathfrak{S}_2, \mathfrak{S}_3, \mathfrak{S}_4, \mathfrak{S}_5, C_1, C_2, C_3,$
FML, FDV, P_1, P_2,
$Cp_4 = Tc$

Clock ;
- Cp_2 : Common Clock Pulse
- Cp_1 : Bit "
- Cp_4 : Digit "
- Cp_3 : Word "

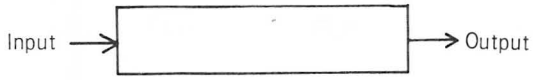
✱ Delay Flip Flop



$\phi_1 = (Cp_1, Cp_4)$ $\phi_2 = Cp_2$

$Cp_1 = FKN, J_1, J_2, G, AC_1, AC_2, T_1^1 \sim T_4^1, K,$
$t_2, t_3, t_4, T_1^1, D_1 \sim D_3$
$Cp_4 = T_1, PNo, PN_1 \sim PN_{17}, BN_1 \sim BN_{17},$
$AN_1 \sim AN_{17}, DT_1 \sim DT_7, DD_1 \sim DD_4$

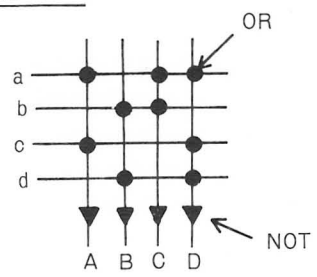
✱ Shift Register



$\phi_1 = Cp_1$ $\phi_2 = Cp_2$

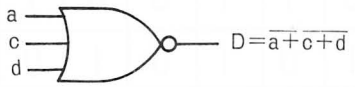
$Cp_1 = A_1 \sim A_{64}, B_1 \sim B_{64}$
$SD_1 \sim SD_4, SE_1 \sim SE_4$

✱ Matrix

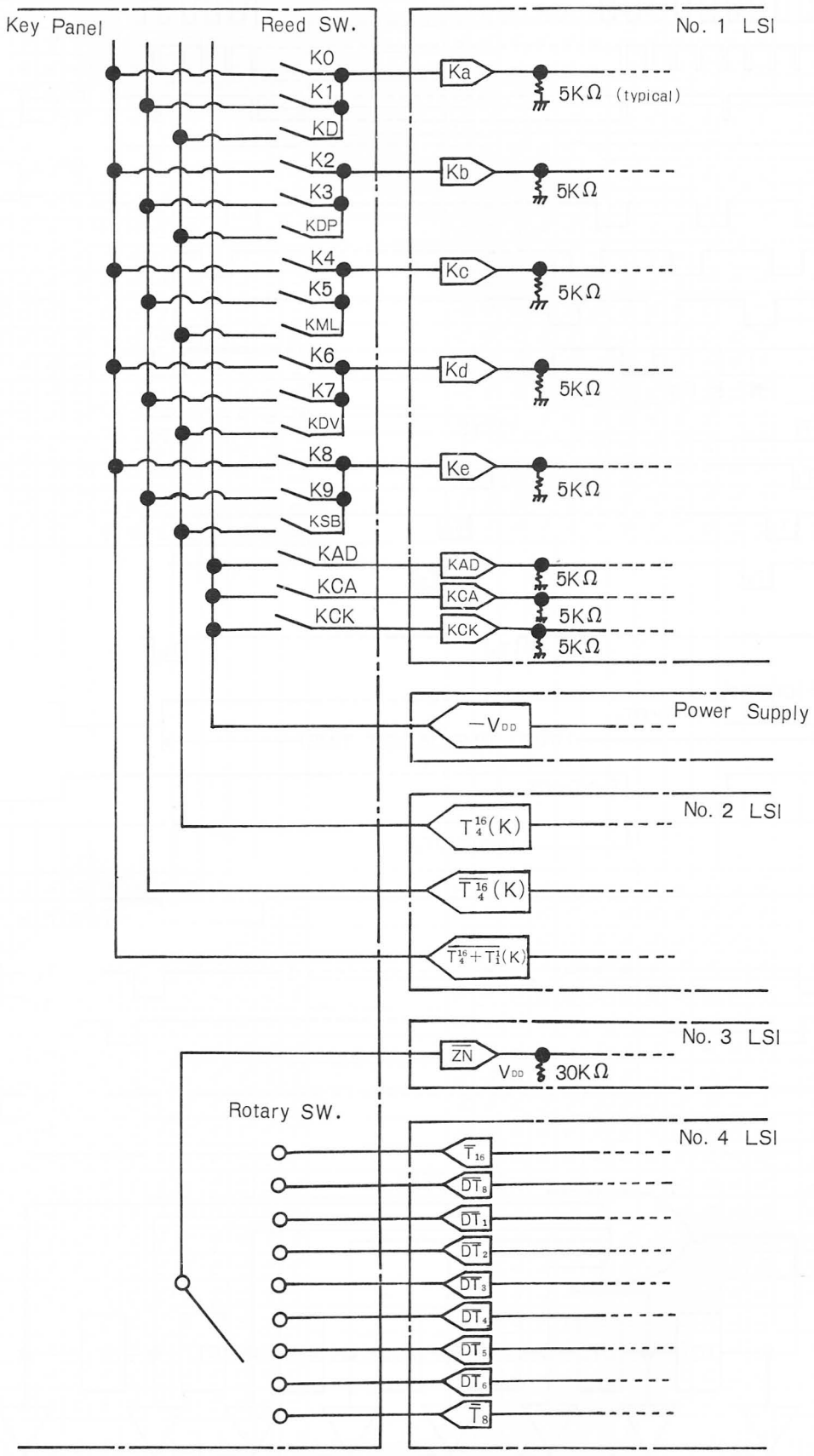


$A = \overline{a+c}$
$B = \overline{b+d}$
$C = \overline{a+b}$
$D = \overline{a+c+d}$

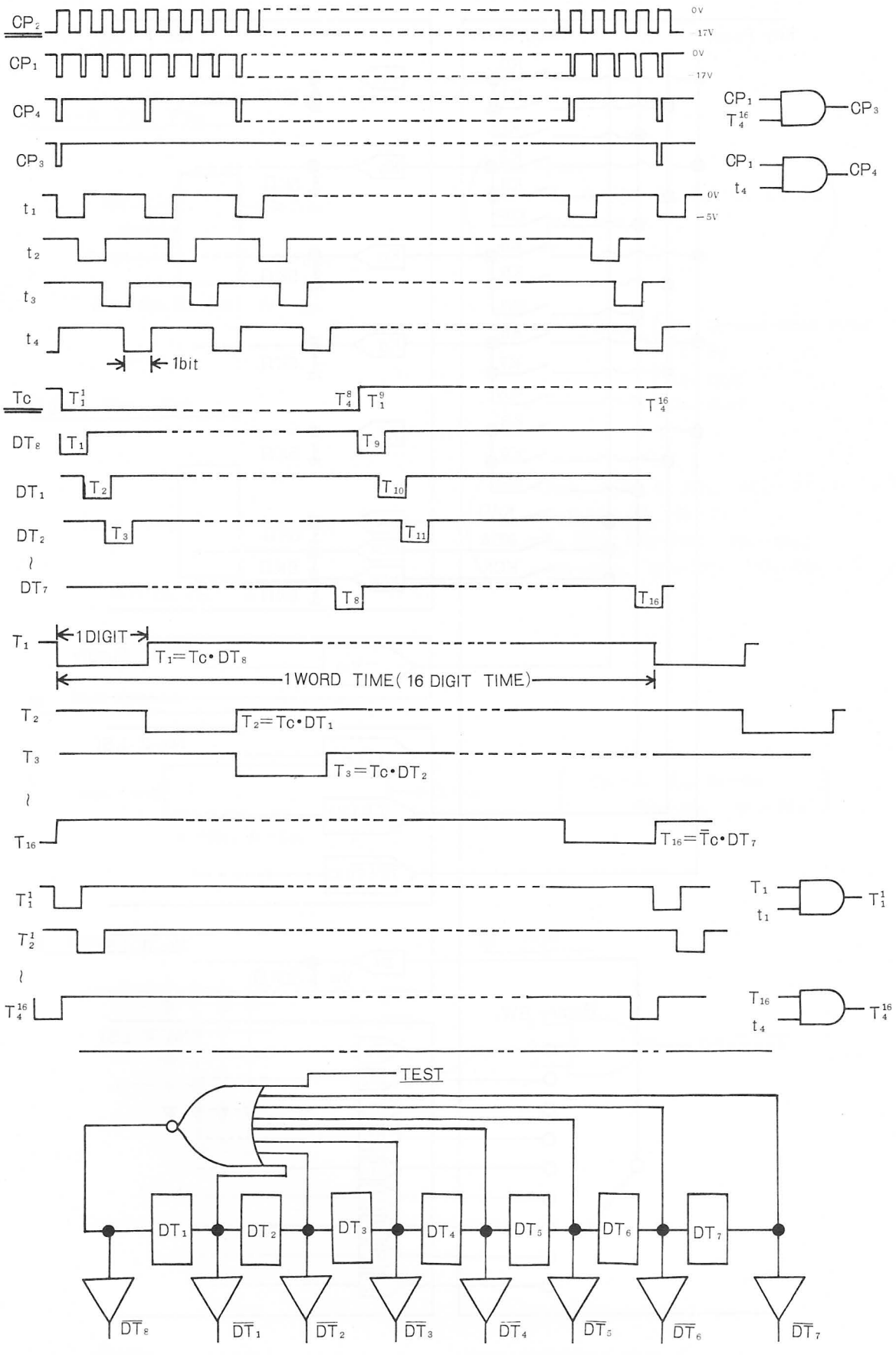
✱ NOR



Key Signal Circuit Schematic



Timing Pulse Diagram



	T_1				T_2				T_3				T_4				T_5			
	t_1	t_2	t_3	t_4	t_1	t_2	t_3	t_4	t_1	t_2	t_3	t_4	t_1	t_2	t_3	t_4	t_1	t_2	t_3	t_4
A_1	m_8	ℓ_1	ℓ_2	ℓ_4	ℓ_8	2_1	2_2	2_4	2_8	3_1	3_2	3_4	3_8	4_1	4_2	4_4	4_8	5_1	5_2	5_4
A_2	m_4	m_8	ℓ_1	ℓ_2	ℓ_4	ℓ_8	2_1	2_2	2_4	2_8	3_1	3_2	3_4	3_8	4_1	4_2	4_4	4_8	5_1	5_2
A_3	m_2	m_4	m_8	ℓ_1	ℓ_2	ℓ_4	ℓ_8	2_1	2_2	2_4	2_8	3_1	3_2	3_4	3_8	4_1	4_2	4_4	4_8	5_1
A_4	m_1	m_2	m_4	m_8	ℓ_1	ℓ_2	ℓ_4	ℓ_8	2_1	2_2	2_4	2_8	3_1	3_2	3_4	3_8	4_1	4_2	4_4	4_8
A_5	15_8	m_1	m_2	m_4	m_8	ℓ_1	ℓ_2	ℓ_4	ℓ_8	2_1	2_2	2_4	2_8	3_1	3_2	3_4	3_8	4_1	4_2	4_4
A_6	15_4	15_8	m_1	m_2	m_4	m_8	ℓ_1	ℓ_2	ℓ_4	ℓ_8	2_1	2_2	2_4	2_8	3_1	3_2	3_4	3_8	4_1	4_2
A_7	15_2	15_4	15_8	m_1	m_2	m_4	m_8	ℓ_1	ℓ_2	ℓ_4	ℓ_8	2_1	2_2	2_4	2_8	3_1	3_2	3_4	3_8	4_1
A_8	15_1	15_2	15_4	15_8	m_1	m_2	m_4	m_8	ℓ_1	ℓ_2	ℓ_4	ℓ_8	2_1	2_2	2_4	2_8	3_1	3_2	3_4	3_8
A_9	14_8	15_1	15_2	15_4	15_8	m_1	m_2	m_4	m_8	ℓ_1	ℓ_2	ℓ_4	ℓ_8	2_1	2_2	2_4	2_8	3_1	3_2	3_4
A_{10}	14_4	14_8	15_1	15_2	15_4	15_8	m_1	m_2	m_4	m_8	ℓ_1	ℓ_2	ℓ_4	ℓ_8	2_1	2_2	2_4	2_8	3_1	3_2
A_{11}	14_2	14_4	14_8	15_1	15_2	15_4	15_8	m_1	m_2	m_4	m_8	ℓ_1	ℓ_2	ℓ_4	ℓ_8	2_1	2_2	2_4	2_8	3_1
A_{12}	14_1	14_2	14_4	14_8	15_1	15_2	15_4	15_8	m_1	m_2	m_4	m_8	ℓ_1	ℓ_2	ℓ_4	ℓ_8	2_1	2_2	2_4	2_8
A_{13}	13_8	14_1	14_2	14_4	14_8	15_1	15_2	15_4	15_8	m_1	m_2	m_4	m_8	ℓ_1	ℓ_2	ℓ_4	ℓ_8	2_1	2_2	2_4
A_{14}	13_4	13_8	14_1	14_2	14_4	14_8	15_1	15_2	15_4	15_8	m_1	m_2	m_4	m_8	ℓ_1	ℓ_2	ℓ_4	ℓ_8	2_1	2_2
A_{15}	13_2	13_4	13_8	14_1	14_2	14_4	14_8	15_1	15_2	15_4	15_8	m_1	m_2	m_4	m_8	ℓ_1	ℓ_2	ℓ_4	ℓ_8	2_1
A_{16}	13_1	13_2	13_4	13_8	14_1	14_2	14_4	14_8	15_1	15_2	15_4	15_8	m_1	m_2	m_4	m_8	ℓ_1	ℓ_2	ℓ_4	ℓ_8
⋮																				
A_{53}	3_8	4_1	4_2	4_4	4_8	5_1	5_2	5_4	5_8	6_1	6_2	6_4	6_8	7_1	7_2	7_4	7_8	8_1	8_2	8_4
A_{54}	3_4	3_8	4_1	4_2	4_4	4_8	5_1	5_2	5_4	5_8	6_1	6_2	6_4	6_8	7_1	7_2	7_4	7_8	8_1	8_2
A_{55}	3_2	3_4	3_8	4_1	4_2	4_4	4_8	5_1	5_2	5_4	5_8	6_1	6_2	6_4	6_8	7_1	7_2	7_4	7_8	8_1
A_{56}	3_1	3_2	3_4	3_8	4_1	4_2	4_4	4_8	5_1	5_2	5_4	5_8	6_1	6_2	6_4	6_8	7_1	7_2	7_4	7_8
A_{57}	2_8	3_1	3_2	3_4	3_8	4_1	4_2	4_4	4_8	5_1	5_2	5_4	5_8	6_1	6_2	6_4	6_8	7_1	7_2	7_4
A_{58}	2_4	2_8	3_1	3_2	3_4	3_8	4_1	4_2	4_4	4_8	5_1	5_2	5_4	5_8	6_1	6_2	6_4	6_8	7_1	7_2
A_{59}	2_2	2_4	2_8	3_1	3_2	3_4	3_8	4_1	4_2	4_4	4_8	5_1	5_2	5_4	5_8	6_1	6_2	6_4	6_8	7_1
A_{60}	2_1	2_2	2_4	2_8	3_1	3_2	3_4	3_8	4_1	4_2	4_4	4_8	5_1	5_2	5_4	5_8	6_1	6_2	6_4	6_8
A_{61}	ℓ_8	2_1	2_2	2_4	2_8	3_1	3_2	3_4	3_8	4_1	4_2	4_4	4_8	5_1	5_2	5_4	5_8	6_1	6_2	6_4
A_{62}	ℓ_4	ℓ_8	2_1	2_2	2_4	2_8	3_1	3_2	3_4	3_8	4_1	4_2	4_4	4_8	5_1	5_2	5_4	5_8	6_1	6_2
A_{63}	ℓ_2	ℓ_4	ℓ_8	2_1	2_2	2_4	2_8	3_1	3_2	3_4	3_8	4_1	4_2	4_4	4_8	5_1	5_2	5_4	5_8	6_1
A_{64}	ℓ_1	ℓ_2	ℓ_4	ℓ_8	2_1	2_2	2_4	2_8	3_1	3_2	3_4	3_8	4_1	4_2	4_4	4_8	5_1	5_2	5_4	5_8
↓																				
SE_4	m_1	m_2	m_4	m_8	ℓ_1	ℓ_2	ℓ_4	ℓ_8	2_1	2_2	2_4	2_8	3_1	3_2	3_4	3_8	4_1	4_2	4_4	4_8

	T_{13}				T_{14}				T_{15}				T_{16}				T_1			
	t_1	t_2	t_3	t_4	t_1	t_2	t_3	t_4	t_1	t_2	t_3	t_4	t_1	t_2	t_3	t_4	t_1	r_2	t_3	t_4
A_1	12_8	13_1	13_2	13_4	13_8	14_1	14_2	14_4	14_8	15_1	15_2	15_4	15_8	m_1	m_2	m_4	m_8	ℓ_1	ℓ_2	ℓ_4
A_2	12_4	12_8	13_1	13_2	13_4	13_8	14_1	14_2	14_4	14_8	15_1	15_2	15_4	15_8	m_1	m_2	m_4	m_8	ℓ_1	ℓ_2
A_3	12_2	12_4	12_8	13_1	13_2	13_4	13_8	14_1	14_2	14_4	14_8	15_1	15_2	15_4	15_8	m_1	m_2	m_4	m_8	ℓ_1
A_4	12_1	12_2	12_4	12_8	13_1	13_2	13_4	13_8	14_1	14_2	14_4	14_8	15_1	15_2	15_4	15_8	m_1	m_2	m_4	m_8
A_5	11_8	12_1	12_2	12_4	12_8	13_1	13_2	13_4	14_8	14_1	14_2	14_4	14_8	15_1	15_2	15_4	15_8	m_1	m_2	m_4
A_6	11_4	11_8	12_1	12_2	12_4	12_8	13_1	13_2	13_4	13_8	14_1	14_2	14_4	14_8	15_1	15_2	15_4	15_8	m_1	m_2
A_7	11_2	11_4	11_8	12_1	12_2	12_4	12_8	13_1	13_2	13_4	13_8	14_1	14_2	14_4	14_8	15_1	15_2	15_4	15_8	m_1
A_8	11_1	11_2	11_4	11_8	12_1	12_2	12_4	12_8	13_1	13_2	13_4	13_8	14_1	14_2	14_4	14_8	15_1	15_2	15_4	15_8
A_9	10_8	11_1	11_2	11_4	11_8	12_1	12_2	12_4	12_8	13_1	13_2	13_4	13_8	14_1	14_2	14_4	14_8	15_1	15_2	15_4
A_{10}	10_4	10_8	11_1	11_2	11_4	11_8	12_1	12_2	12_4	12_8	13_1	13_2	13_4	13_8	14_1	14_2	14_4	14_8	15_1	15_2
A_{11}	10_2	10_4	10_8	11_1	11_2	11_4	11_8	12_1	12_2	12_4	12_8	13_1	13_2	13_4	13_8	14_1	14_2	14_4	14_8	15_1
A_{12}	10_1	10_2	10_4	10_8	11_1	11_2	11_4	11_8	12_1	12_2	12_4	12_8	13_1	13_2	13_4	13_8	14_1	14_2	14_4	14_8
A_{13}	9_8	10_1	10_2	10_4	10_8	11_1	11_2	11_4	11_8	12_1	12_2	12_4	12_8	13_1	13_2	13_4	13_8	14_1	14_2	14_4
A_{14}	9_4	9_8	10_1	10_2	10_4	10_8	11_1	11_2	11_4	11_8	12_1	12_2	12_4	12_8	13_1	13_2	13_4	13_8	14_1	14_2
A_{15}	9_2	9_4	9_8	10_1	10_2	10_4	10_8	11_1	11_2	11_4	11_8	12_1	12_2	12_4	12_8	13_1	13_2	13_4	13_8	14_1
A_{16}	9_1	9_2	9_4	9_8	10_1	10_2	10_4	10_8	11_1	11_2	11_4	11_8	12_1	12_2	12_4	12_8	13_1	13_2	13_4	13_8
⋮																				
A_{53}	15_8	m_1	m_2	m_4	m_8	ℓ_1	ℓ_2	ℓ_4	ℓ_8	2_1	2_2	2_4	2_8	3_1	3_2	3_4	3_8	4_1	4_2	4_4
A_{54}	15_4	15_8	m_1	m_2	m_4	m_8	ℓ_1	ℓ_2	ℓ_4	ℓ_8	2_1	2_2	2_4	2_8	3_1	3_2	3_4	3_8	4_1	4_2
A_{55}	15_2	15_4	15_8	m_1	m_2	m_4	m_8	ℓ_1	ℓ_2	ℓ_4	ℓ_8	2_1	2_2	2_4	2_8	3_1	3_2	3_4	3_8	4_1
A_{56}	15_1	15_2	15_4	15_8	m_1	m_2	m_4	m_8	ℓ_1	ℓ_2	ℓ_4	ℓ_8	2_1	2_2	2_4	2_8	3_1	3_2	3_4	3_8
A_{57}	14_8	15_1	15_2	15_4	15_8	m_1	m_2	m_4	m_8	ℓ_1	ℓ_2	ℓ_4	ℓ_8	2_1	2_2	2_4	2_8	3_1	3_2	3_4
A_{58}	14_4	14_8	15_1	15_2	15_4	15_8	m_1	m_2	m_4	m_8	ℓ_1	ℓ_2	ℓ_4	ℓ_8	2_1	2_2	2_4	2_8	3_1	3_2
A_{59}	14_2	14_4	14_8	15_1	15_2	15_4	15_8	m_1	m_2	m_4	m_8	ℓ_1	ℓ_2	ℓ_4	ℓ_8	2_1	2_2	2_4	2_8	3_1
A_{60}	14_1	14_2	14_4	14_8	15_1	15_2	15_4	15_8	m_1	m_2	m_4	m_8	ℓ_1	ℓ_2	ℓ_4	ℓ_8	2_1	2_2	2_4	2_8
A_{61}	13_8	14_1	14_2	14_4	14_8	15_1	15_2	15_4	15_8	m_1	m_2	m_4	m_8	ℓ_1	ℓ_2	ℓ_4	ℓ_8	2_1	2_2	2_4
A_{62}	13_4	13_8	14_1	14_2	14_4	14_8	15_1	15_2	15_4	15_8	m_1	m_2	m_4	m_8	ℓ_1	ℓ_2	ℓ_4	ℓ_8	2_1	2_2
A_{63}	13_2	13_4	13_8	14_1	14_2	14_4	14_8	15_1	15_2	15_4	15_8	m_1	m_2	m_4	m_8	ℓ_1	ℓ_2	ℓ_4	ℓ_8	2_1
A_{64}	13_1	13_2	13_4	13_8	14_1	14_2	14_4	14_8	15_1	15_2	15_4	15_8	m_1	m_2	m_4	m_8	ℓ_1	ℓ_2	ℓ_4	ℓ_8
↓																				
SE_4	12_1	12_2	12_4	12_8	13_1	13_2	13_4	13_8	14_1	14_2	14_4	14_8	15_1	15_2	15_4	15_8	m_1	m_2	m_4	m_8

Contents of Counter AN BN PN

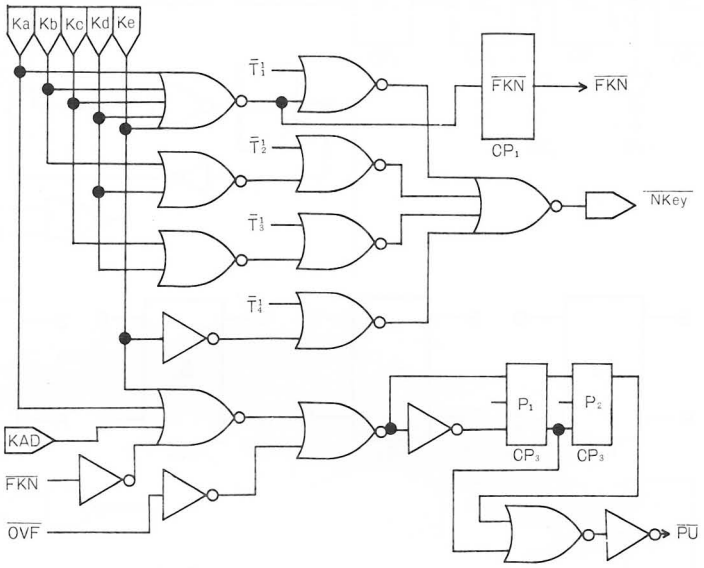
	T_1	T_2	T_3	T_4	T_5	T_6	T_7	T_8	T_9	T_{10}	T_{11}	T_{12}	T_{13}	T_{14}	T_{15}	T_{16}
AN_1 (BN_1)	15	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
AN_2 (BN_2)	14	15	0	1												13
AN_3 (BN_3)	13	14	15													12
AN_4 (BN_4)	12	13														11
AN_5 (BN_5)	11															10
AN_6 (BN_6)	10															9
AN_7 (BN_7)	9															8
AN_8 (BN_8)	8															7
AN_9 (BN_9)	7															6
AN_{10} (BN_{10})	6															5
AN_{11} (BN_{11})	5														3	4
AN_{12} (BN_{12})	4													1	2	3
AN_{13} (BN_{13})	3												15	0	1	2
AN_{14} (BN_{14})	2											13	14	15	0	1
AN_{15} (BN_{15})	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	0
AN_{16} (BN_{16})	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
AN_{17} (BN_{17})	15	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14

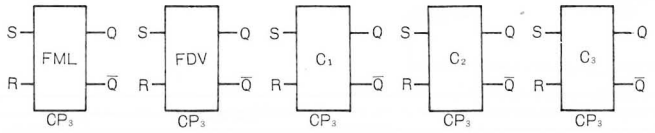
B_4	m	ℓ	2	3	4	5	6	7	8	9	10	11	12	13	14	15
B_{60}	2	3	4	5	6	7	8	9	10	11	12	13	14	15	m	ℓ

PN_0	1															
PN_1	16	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
PN_2	15	16	1	2												14
PN_3	14	15	16													13
PN_4	13	14														12
PN_5	12															11
PN_6	11															10
PN_7	10															9
PN_8	9															8
PN_9	8															7
PN_{10}	7															6
PN_{11}	6														4	5
PN_{12}	5													2	3	4
PN_{13}	4												16	1	2	3
PN_{14}	3											14	15	16	1	2
PN_{15}	2										12	13	14	15	16	1
PN_{16}	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
PN_{17}	16	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
	T_1	T_2	T_3	T_4	T_5	T_6	T_7	T_8	T_9	T_{10}	T_{11}	T_{12}	T_{13}	T_{14}	T_{15}	T_{16}

L.S.I. No. 1 - 1

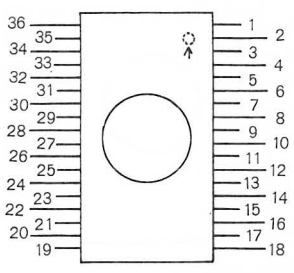
(FKN, NKey, PU, FML, FDV, C_1, C_2, C_3, $S_1 \sim S_5$, CP_3, A, B, AN, BN, PN, I, II, III,)





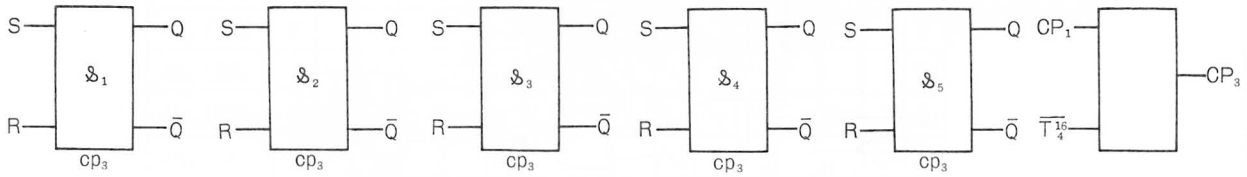
(Signal)	(Contents)
Ka	$K_0 + K_1 +$ KD
Kb	$K_2 + K_3 +$ KDP
Kc	$K_4 + K_5 +$ KML
Kd	$K_6 + K_7 +$ KDV
Ke	$K_8 + K_9 +$ KSB
FML set	Kc
FML reset	KCA+Kd+KAD•PU•$\overline{C_1}$•C_2
FDV set	Kd
FDV reset	KCA+Kc+KAD•PU•$\overline{C_1}$•C_2
C_1 set	$S_3 + S_{13}$•$\overline{C_1}$•$\overline{C_2} + S_{19}$•$\overline{C_1}$•C_2•$\overline{J_2} + S_8$•$J_1 + SP_1$•$\overline{C_1} + S_4$•$\overline{J_1}$
C_1 reset	KAD•PU•$\overline{C_1}$•C_2+(KAD+Ke)PU•$\overline{FML}$•$\overline{FDV}$+OVF+Kc+Kd+KCA
	$+ S_6$•$C_2 + S_6$•$\overline{C_2} + S_{10}$•$C_1 + S_{21} + SP_1$•C_1•$G + SP_1$•C_1•$\overline{G} + SP_2 + S_7$
	$+ S_{13}$•C_1
C_2 set	Ke•PU•$\overline{FML}$•$\overline{FDV} + S_9$•$\overline{C_2}$•$J_2 + S_{11}$•$\overline{C_2}$•$J_1 + S_{19}$•$\overline{C_2}$•$J_2 + S_{13}$•J_1
	$+ S_{19}$•C_1•J_1
C_2 reset	KAD•PU•$\overline{C_1}$•$\overline{C_2}$+OVF+Kc+Kd+KCA+S_{21}•$J_2 + S_6$•$C_2 + S_{13}$•C_2•$\overline{G}$
	$+ S_7 + S_5$•C_2•$\overline{J_1}$•$J_2 + S_{12}$
C_3 set	Kb
C_3 reset	KCA+Kc+Kd+KCK+Ke•PU•$\overline{FML}$•$\overline{FDV}$+KAD•PU
P•U	$\overline{P_2}$ • P_1
P_1 set	$\overline{OVF}$•(Ke+Ka+KAD+FKN)

(TOP VIEW)



1	$\overline{PN}$	O	13	$\overline{J_1}$	I	25	$\overline{OVF}$	I
2	$\overline{BN}$	O	14	$\overline{J_2}$	I	26	Cp_2	I
3	$\overline{AN}$	O	15	$\overline{G}$	I	27		
4	Ⓑ	O	16	Ka	I	28	Cp_1	I
5	Ⓐ	O	17	Kb	I	29	$\overline{T_4^{16}}$	I
6	$\overline{S_5}$	O	18	Kc	I	30	KCA	I
7	$\overline{S_4}$	O	19	Kd	I	31	KCK	I
8	$\overline{S_7}$	O	20	Ke	I	32	$-V_{GG}$	
9	$\overline{C_2}$	O	21	$\overline{NKey}$	O	33	$-V_{CC}$	
10	$\overline{C_1}$	O	22	$\overline{ALK(TEST)}$	O	34	$\overline{III}$	O
11	$\overline{S_2}$	O	23	KAD	I	35	$\overline{II}$	O
12	$\overline{S_1}$	O	24	V_{SS}(GND)		36	$\overline{I}$	O

L.S.I. No. 1 -2



(Signal)	(Contents)
$\mathfrak{F}_1$ set	$S_{20}\cdot\bar{J}_1+S_7+S_{21}+(KAD+Ke)PU\cdot\overline{FML}\cdot\overline{FDV}+KAD\cdot PU\cdot C_1\cdot FDV$
$\mathfrak{F}_1$ reset	$S_{15}\cdot\bar{J}_1+S_{11}\cdot C_2+S_6\cdot\bar{C}_2+OVF+Kc+Kd+KCA$
$\mathfrak{F}_2$ set	$S_{13}\cdot C_2+S_8$
$\mathfrak{F}_2$ reset	$S_{10}\cdot\bar{C}_1+S_9\cdot\bar{C}_1\cdot J_1+S_{21}+S_{10}\cdot C_1+OVF+Kc+Kd+KCA$
$\mathfrak{F}_3$ set	$S_{15}\cdot\bar{J}_1+S_{13}\cdot C_2+S_{10}\cdot\bar{C}_1+S_4+S_{20}+S_{17}+S_{10}\cdot C_1+KAD\cdot PU\cdot FML(C_1+\bar{C}_2)+FKN\cdot PU$
$\mathfrak{F}_3$ reset	$S_9+S_2+S_5+S_{19}+S_{14}+S_{16}+S_6\cdot\bar{C}_2+OVF+Kc+Kd+KCA$
$\mathfrak{F}_4$ set	$S_1+S_{18}+S_6\cdot\bar{C}_2+KAD\cdot PU\cdot FML(C_1+\bar{C}_2)+(KAD+Ke)PU\cdot\overline{FML}\cdot\overline{FDV}+KAD\cdot PU\cdot\bar{C}_1\cdot C_2$
$\mathfrak{F}_4$ reset	$SP_1\cdot J_2+S_4\cdot\bar{J}_1\cdot C_1+S_{20}+S_3+OVF+Kc+Kd+KCA$
$\mathfrak{F}_5$ set	$S_{20}\cdot\bar{J}_1+S_{19}\cdot C_1\cdot J_1+S_{12}+S_{19}\cdot\bar{C}_2\cdot J_2+S_6\cdot\bar{C}_2+KAD\cdot PU\cdot FML(C_1+\bar{C}_2)+KAD\cdot PU\cdot\bar{C}_1\cdot C_2$
$\mathfrak{F}_5$ reset	$SP_2+S_{17}+OVF+Kc+Kd+KCA$
Ⓐ	$S_{10}\cdot\bar{C}_1+SP_1\cdot C_1\cdot\bar{G}+SP_1\cdot C_1\cdot G+S_{21}+S_{20}+S_{17}+S_{15}+S_{12}\cdot\bar{C}_2+S_{11}\cdot\bar{C}_2\cdot\bar{J}_1+S_{10}\cdot C_1+S_7\cdot\bar{C}_2\cdot C_1+$
	$S_6\cdot\bar{C}_2+S_6\cdot C_2+S_5\cdot\bar{G}\cdot\bar{C}_1+S_5\cdot G\cdot\bar{C}_1+S_3+S_2\cdot\bar{C}_1+KCA+KCK$
Ⓑ	$S_{14}+S_{16}+S_{13}\cdot\bar{C}_1\cdot\bar{C}_2+S_{12}\cdot\bar{C}_2+S_7\cdot\bar{C}_2+S_6\cdot\bar{C}_2+S_5\cdot G\cdot C_1\cdot J_1+S_5\cdot\bar{G}\cdot J_1\cdot C_1+S_1\cdot\bar{C}_1\cdot\bar{C}_2+KCA$
I	$S_{10}\cdot\bar{C}_1+SP_2+SP_1\cdot C_1\cdot\bar{G}+SP_1\cdot C_1\cdot G+S_{21}+S_{20}+S_{19}\cdot C_2\cdot\bar{C}_1\cdot\bar{J}_2+S_{13}\cdot C_2\cdot\bar{G}+S_{13}\cdot\bar{C}_1\cdot\bar{C}_2+S_{11}\cdot\bar{C}_2\cdot\bar{J}_1+S_5\cdot$
	$G\cdot C_1\cdot J_1+S_5\cdot\bar{G}\cdot\bar{C}_1+S_5\cdot G\cdot\bar{C}_1+S_5\cdot\bar{G}\cdot C_1\cdot J_1+S_3+S_2\cdot\bar{C}_1+KCA+KCK$
II	$SP_2+S_{21}+S_{19}\cdot\bar{C}_2\cdot J_2+S_{19}\cdot C_2\cdot\bar{C}_1\cdot\bar{J}_2+S_{17}+S_{15}\cdot J_1+S_{15}+S_{12}\cdot\bar{C}_2+S_{11}\cdot\bar{C}_2\cdot J_1+S_{10}\cdot C_1+S_9\cdot J_2\cdot\bar{C}_2+$
	$S_8+S_7\cdot\bar{C}_2\cdot C_1+S_7\cdot\bar{C}_2+S_6\cdot\bar{C}_2+S_2\cdot\bar{C}_1+S_1\cdot\bar{C}_1\cdot\bar{C}_2+KCA+KCK$
III	$SP_2+SP_1\cdot C_1\cdot\bar{G}+S_{19}\cdot\bar{C}_2\cdot J_2+S_{19}\cdot C_2\cdot\bar{C}_1\cdot\bar{J}_2+S_{17}+S_{15}\cdot J_1+S_{15}+S_{14}+S_{16}+S_{11}\cdot\bar{C}_2\cdot J_1+S_{11}\cdot\bar{C}_2\cdot\bar{J}_1$
	$+S_{10}\cdot C_1+S_6\cdot\bar{C}_2+S_6\cdot C_2+S_5\cdot\bar{G}\cdot\bar{C}_1+S_5\cdot\bar{G}\cdot J_1\cdot C_1+S_2\cdot\bar{C}_1+KCA+KCK$

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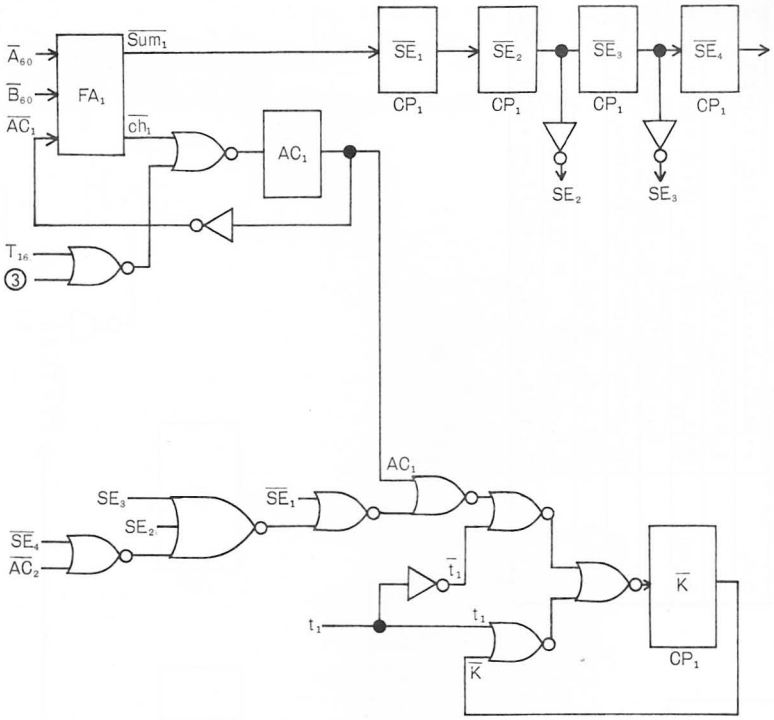
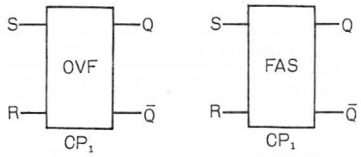
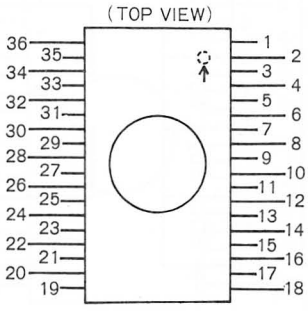
$\left(\overline{T_4^{16}+T_1^1}(K),\ \overline{T_4^{16}}(K),\ T_4^{16},\ T_4^{16}(K),\ J_3,\ FA_1,\ FA_2,\ SE_1 \sim SE_4,\ K,\ OVF,\ FAS\right)$
$\left(A_1\ set,\ B_1\ set,\ SD_1 \sim SD_4,\ t_1 \sim t_4,\ \ A_1 \sim A_4,\ A_{61} \sim A_{64}\right)$



(Signal)	(Contents)
Sum_1	$A_{60} \cdot \bar{B}_{60} \cdot \overline{AC_1} + \bar{A}_{60} \cdot B_{60} \cdot \overline{AC_1} + \bar{A}_{60} \cdot \bar{B}_{60} \cdot AC_1 + A_{60} \cdot B_{60} \cdot AC_1$
Ch_1	$A_{60} \cdot B_{60} + A_{60} \cdot AC_1 + B_{60} \cdot AC_1$
AC_1 set	$Ch_1 \cdot (③ + T_{16})$
K set	$K \cdot \bar{t}_1 + t_1 \left[AC_1 + SE_1 (SE_2 + SE_3 + SE_4 \cdot AC_2)\right]$
FAS set	$S_6 \cdot \bar{C}_1 \cdot \bar{C}_2 \cdot \bar{K} \cdot T_4^{16}$
FAS reset	$S_6 \cdot C_1 \cdot \bar{C}_2 \cdot K \cdot T_4^{16} + ⑦ \cdot Ⓑ$
OVF set	$S_7 \cdot T_{16} \cdot B_{64} + S_7 \cdot T_{16} \cdot B_4 + S_7 \cdot T_{16} \cdot A_4 + S_7 \cdot T_{16} \cdot A_{64} + S_3 \cdot T_{16} \cdot A_{64} + S_3 \cdot$
	$T_{16} \cdot AN_{16} + S_5 \cdot ④ \cdot A_{64} \cdot \bar{C}_1 \cdot T_{16} + S_5 \cdot ④ \cdot B_{64} \cdot C_1 \cdot T_{16} + S_6 \cdot C_1 \cdot \bar{C}_2 \cdot K \cdot \overline{FAS} \cdot$
	$T_4^{16} + S_{10} \cdot C_1 \cdot \overline{PN_{15}} \cdot B_4 + S_{12} \cdot T_{16} \cdot A_{64} + S_{12} \cdot T_{16} \cdot A_4 + S_{12} \cdot T_{16} \cdot B_{64} + S_{20} \cdot PN_{16}$
	$\cdot T_{16} + SP_1 \cdot ④ \cdot T_{16} \cdot A_{64}$
OVF reset	⑦ · Ⓑ





1	$\overline{T_{16}}$	I	13	$-V_{DD}$		25	CP_2	I
2	$\overline{S_1}$	I	14	V_{SS} (GND)		26	$\bar{B}_{60}$	I
3	$\overline{S_2}$	I	15			27	$\overline{PN_{15}}$	I
4	$\overline{S_3}$	I	16	$\overline{T_4^{16}+T_1^1}(K)$	0	28	$\bar{A}_{60}$	I
5	$\overline{S_4}$	I	17	TEST ※		29	$\bar{B}_4$	I
6	$\overline{S_5}$	I	18	$\bar{t}_4$	0	30	$\overline{AN_{16}}$	I
7	$\bar{C}_1$	I	19	$\overline{T_4^{16}}$	0	31	Ⓐ	I
8	$\bar{C}_2$	I	20	$T_4^{16}(K)$	0	32	Ⓑ	I
9	$\overline{A_1\ set}$	0	21	$\overline{T_4^{16}}(K)$	0	33	$\bar{I}$	I
10	$\bar{J}_3$	0	22	CP_1	I	34	$\bar{\bar{I}}$	I
11	$\overline{B_1\ set}$	0	23			35	$\bar{\bar{\bar{I}}}$	I
12	$\overline{OVF}$	0	24	$-V_{GG}$		36	$\overline{NKey}$	I

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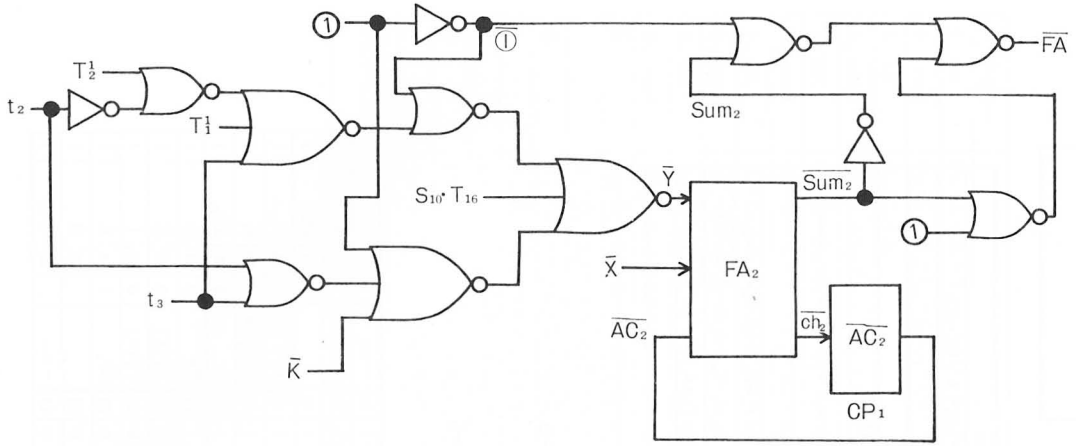
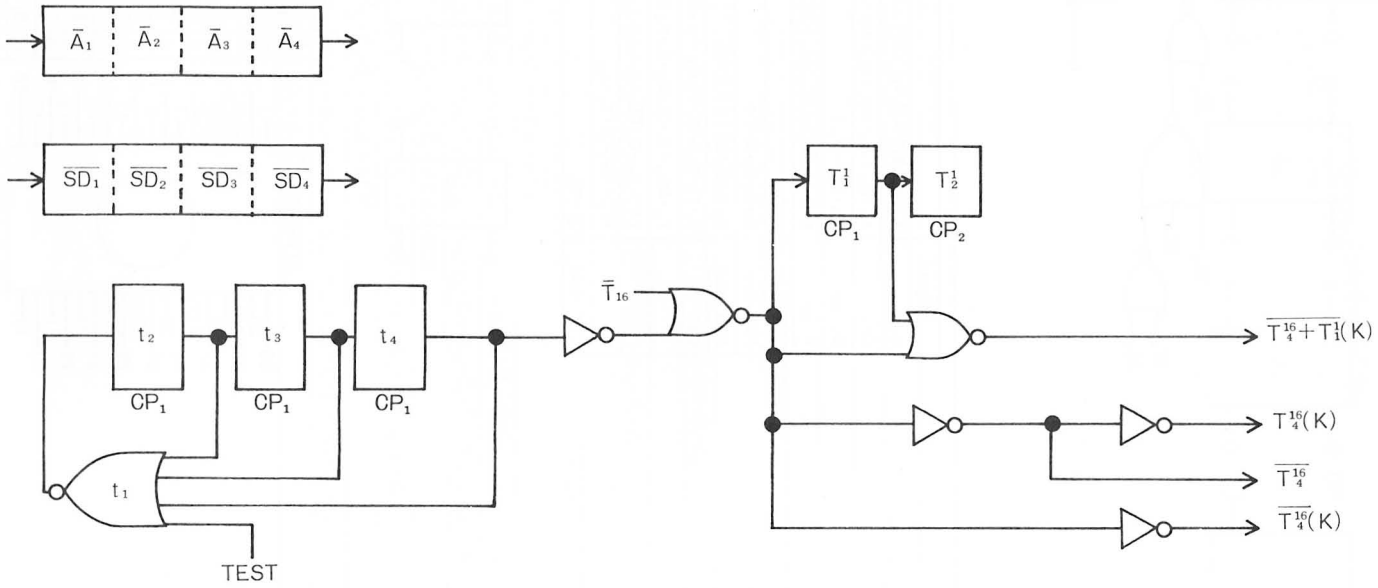
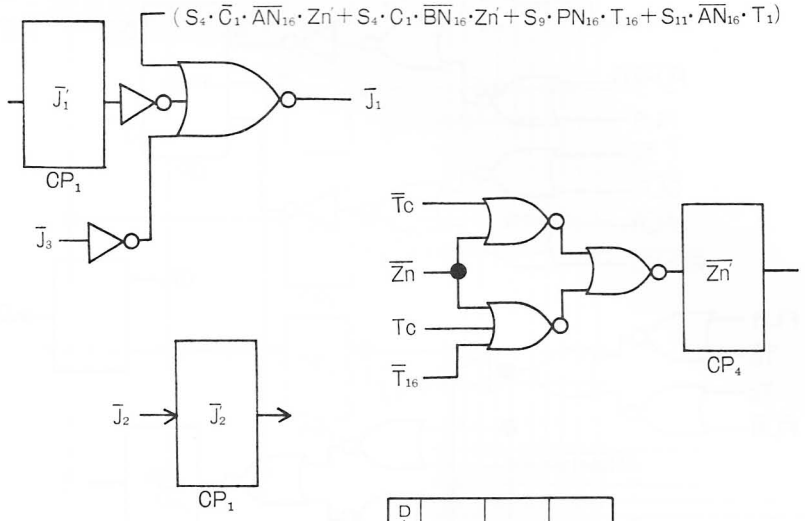


(Signal)	(Contents)
X	ADD・SE4＋Ⓐ・T/C・A64＋Ⓑ・T/C・B64
Y	S10・T16＋Ⓘ(T 1 2・t2＋T1 1＋t3)＋Ⓘ(t2＋t3)K
FA	Ⓘ・Sum2＋Ⓘ・Sum2
Sum2	Y・X・AC2＋Y・X・AC2＋Y・X・AC2＋Y・X・AC2
ch2	X・Y＋X・AC2＋Y・AC2
A1 set	Ⓐ・A64＋Ⓐ・DR・PN16・A64＋Ⓐ(T/C＋ADD)FA＋Ⓐ・EXC・
	B64＋Ⓐ・RS・T16・A60＋Ⓐ・LS・SD4＋Ⓐ・LS・NKey
B1 set	Ⓑ・LS・SD4＋Ⓑ・RS・T16・B60＋Ⓑ・EXC・A64＋Ⓑ・T/C・FA＋Ⓑ・B64
SD1 set	Ⓐ・LS・A64＋Ⓑ・LS・B64
t1	t2・t3・t4・TEST　※ TEST → GND
J3	S8・T16・A64＋S13・T16・B4＋S15・T16・K＋S19・PN16・B60



L.S.I. No. 3 - 1

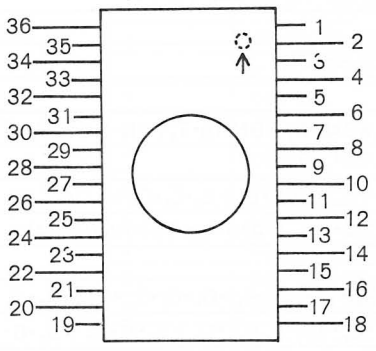
$(J_1, J_2, G, ZN', AN_1 \sim AN_{17}, CP_4, FLR, DP, DrA$
$PN_0 \sim PN_{17}, BN_1 \sim BN_{17})$



DIAL	Zn	$\overline{Zn}$	Zn'
0	1	$\bar{T}_{16}$	T_1
1	2	$\overline{DT}_8$	T_2
2	3	$\overline{DT}_1$	T_3
3	4	$\overline{DT}_2$	T_4
4	5	$\overline{DT}_3$	T_5
5	6	$\overline{DT}_4$	T_6
6	7	$\overline{DT}_5$	T_7
7	8	$\overline{DT}_6$	T_8
8	9	$\bar{T}_8$	T_9

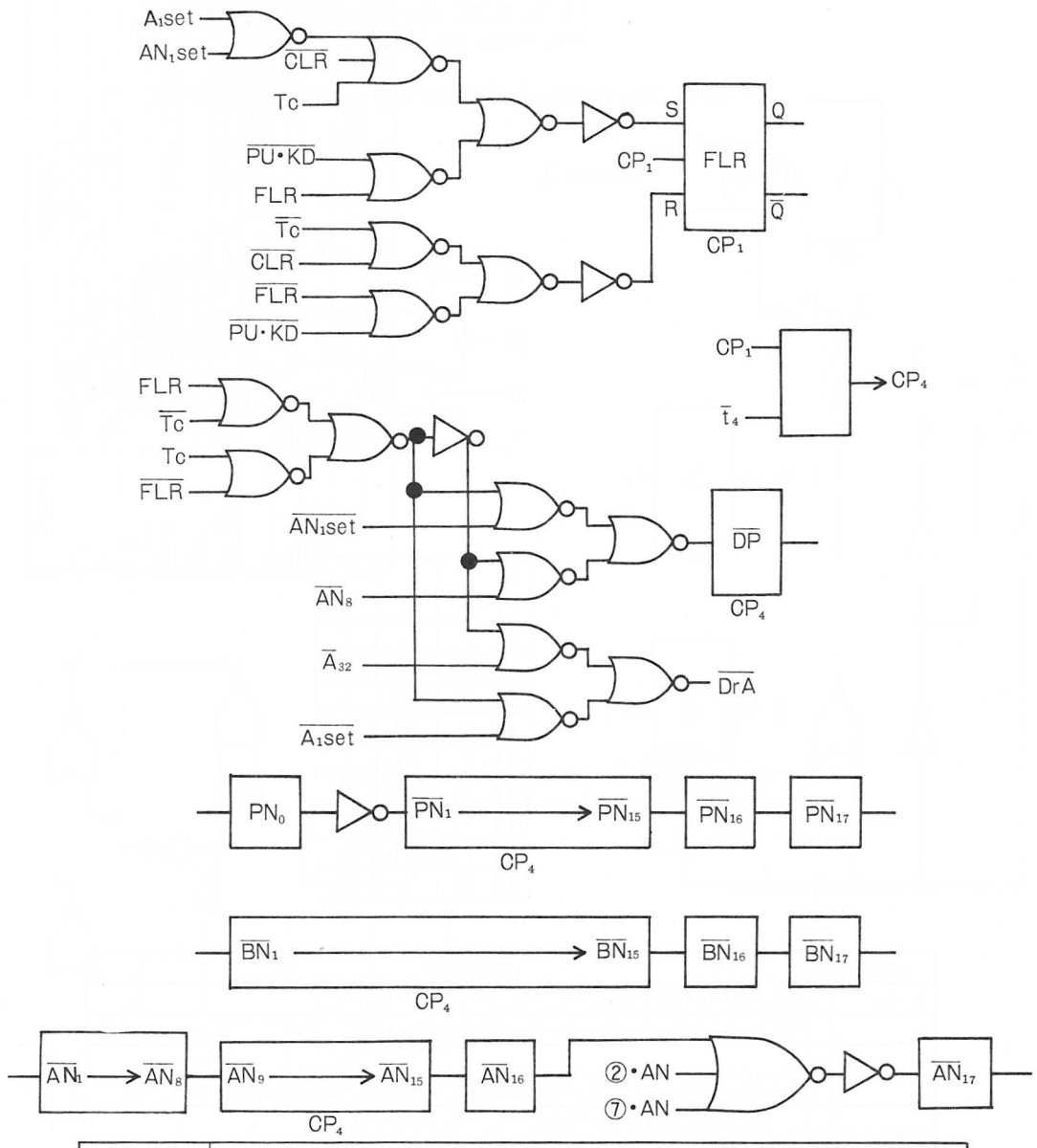
(Signal)	(Contents)
J_1' set	$(S_5+S_8) \cdot J_1 \cdot \overline{T_4^{16}} + J_1(S_4+S_{11}+S_{13}) + J_1(S_{18}+S_{19}+S_{20})$
J_3	$S_8 \cdot T_{16} \cdot A_{64} + S_{13} \cdot T_{16} \cdot B_4 + S_{15} \cdot T_{16} \cdot K + S_{19} \cdot PN_{16} \cdot B_{60}$
J_2' set	J_2
J_2	$S_8 \cdot AN_{16} \cdot \overline{AN}_{15} \cdot \bar{J}_1 \cdot T_{16} + S_{18} \cdot BN_{16} \cdot AN_{16} \cdot \bar{C}_2 + S_{18} \cdot BN_{16} \cdot \overline{AN}_{16} \cdot C_2 + SP_1 \cdot AN_{16} \cdot Zn'$
	$+ S_{21} \cdot AN_{16} \cdot AN_{15} \cdot T_{16} + J_2'(S_9+S_{18}+S_{19}) + SP_1 \cdot J_2'$
G' set	G
G	$S_4 \cdot Zn' + SP_1 \cdot \bar{C}_1 \cdot Zn' + S_{13} \cdot \bar{C}_2 \cdot BN_{16} + S_5 \cdot G' + S_{13} \cdot C_2 \cdot G' + SP_1 \cdot C_1 \cdot G'$
	$+ S_4 \cdot C_1 \cdot \overline{BN}_{16} \cdot G' + (S_4+SP_1)\,\bar{C}_1 \cdot \overline{AN}_{16} \cdot G' + S_{13} \cdot \bar{C}_2 \cdot \overline{AN}_{16} \cdot G'$

(TOP VIEW)



1	$\bar{G}$	0	13	$\bar{\bar{I}}$	I	25	$\bar{t}_4$	I
2	$\bar{C}_2$	I	14	$\bar{\bar{I}}$	I	26	$\overline{Tc}$	I
3	$\bar{C}_1$	I	15	$\bar{T}_{16}$	I	27	$\overline{A_1 \text{ set}}$	I
4	$\bar{S}_5$	I	16	$\overline{PN}_{15}$	0	28	$\bar{A}_{32}$	I
5	$\bar{S}_4$	I	17			29	CP_1	I
6	$\bar{S}_3$	I	18	V_{SS} (GND)		30	CP_2	I
7	$\bar{S}_2$	I	19	$-V_{DD}$		31	$\overline{FLR}$	0
8	$\bar{S}_1$	I	20	$\overline{AN}_{16}$	0	32	$\overline{DrA}$	0
9	$\overline{AN}$	I	21	$\overline{BN}_{16}$	0	33	$\overline{Dp}$	0
10	$\overline{BN}$	I	22	$-V_{GG}$		34	$\bar{J}_3$	I
11	$\overline{PN}$	I	23			35	$\bar{J}_1$	0
12	$\bar{I}$	I	24	$\overline{ZN}$	I	36	$\bar{J}_2$	0

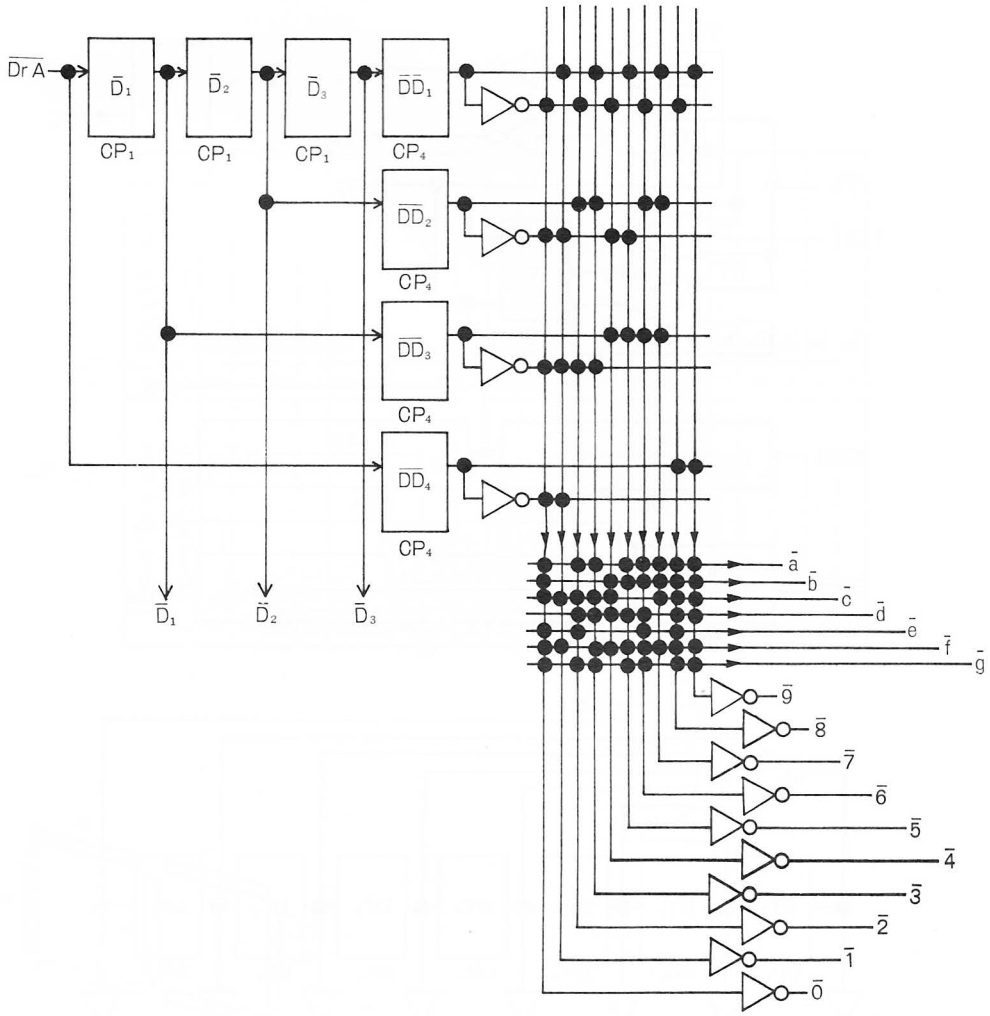
L.S.I. No. 3 -2



(Signal)	(Contents)
FLR set	$PU \cdot KD \cdot \overline{FLR} + \overline{Tc} \cdot CLR \cdot (A_1 set + AN_1 set)$
FLR reset	$Tc \cdot CLR + FLR \cdot PU \cdot KD$
DP set	$AN_1 set \cdot (\overline{FLR} \cdot Tc + FLR \cdot \overline{Tc}) + AN_8 \cdot (FLR + \overline{Tc}) \cdot (\overline{FLR} + Tc)$
DrA	$A_{32} \cdot (FLR + \overline{Tc}) \cdot (\overline{FLR} + Tc) + A_1 set \ (\overline{FLR} \cdot Tc) + (FLR \cdot \overline{Tc})$
PN_0 set	$PN \cdot J_1 \cdot Ig \cdot T_{16}$
PN_1 set	$PN \cdot LS \cdot PN_{17} + PN \cdot Ig \cdot T_1 + PN_0 + PN_{16}(\overline{CLR} + \overline{PN})$
PN	$S_{10} \cdot \overline{C}_1 + SP_2 + S_{20} + S_{15} \cdot J_1 + S_8 + KCA$
BN_1 set	$BN \cdot LS \cdot BN_{17} + BN \cdot RS \cdot BN_{15} \cdot \overline{T}_{16} + BN \cdot EXC \cdot AN_{16} + BN \cdot Ig \cdot T_1 + BN \cdot LS \cdot BN_{16} \cdot T_{16}$
	$+ \overline{BN} \cdot BN_{16}$
BN	$S_{13} \cdot \overline{C}_1 \cdot \overline{C}_2 + S_7 \cdot \overline{C}_2 + S_8 \cdot \overline{C}_2 + S_5 \cdot G \cdot C_1 \cdot J_1 + S_5 \cdot \overline{G} \cdot J_1 \cdot C_1 + S_1 \cdot \overline{C}_1 \cdot \overline{C}_2 + KCA$
AN_1 set	$AN \cdot LS \cdot AN_{17} + AN \cdot RS \cdot AN_{15} \cdot \overline{T}_{16} + AN \cdot EXC \cdot BN_{16} + AN \cdot Ig \cdot T_1 + AN \cdot LS \cdot AN_{16}$
	$\cdot T_{16} + \overline{AN} \cdot AN_{16} + AN \cdot 16g \cdot T_{16}$
AN	$S_{10} \cdot \overline{C}_1 + SP_1 \cdot C_1 \cdot \overline{G} + SP_1 \cdot C_1 \cdot G + S_{20} + S_{19} \cdot \overline{C}_2 \cdot J_2 + S_{19} \cdot C_2 \cdot \overline{C}_1 \cdot \overline{J}_2 + S_{13} \cdot C_2 \cdot \overline{G}$
	$+ S_{12} \cdot \overline{C}_2 + S_{11} \cdot \overline{C}_2 \cdot J_1 + S_{11} \cdot \overline{C}_2 \cdot \overline{J}_1 + S_9 \cdot \overline{C}_2 \cdot J_2 + S_7 \cdot \overline{C}_2 \cdot C_1 + S_5 \cdot \overline{G} \cdot \overline{C}_1 + S_5 \cdot G \cdot$
	$\overline{C}_1 + S_3 \cdot C_3 + S_2 \cdot \overline{C}_1 + KCA + KCK$

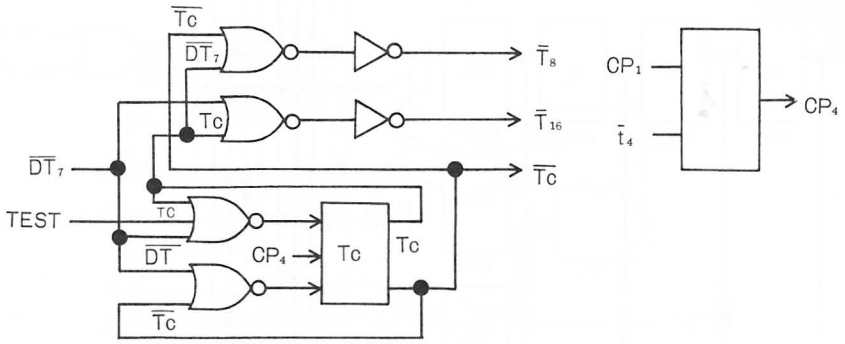
L.S.I. No. 4 - 1

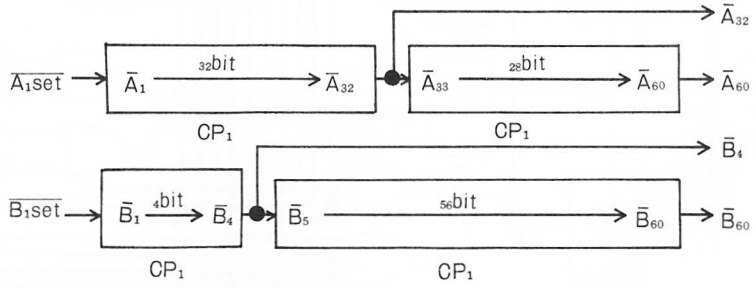
$(D_1 \sim D_3,\ DT_1 \sim DT_8,\ A_1 \sim A_{60},\ B_1 \sim B_{60},\ TC,\ \overline{T}_8,\ \overline{T}_{16})$
$\overline{DD}_1 \sim \overline{DD}_4,\ 0 \sim 9,\ CP_4$

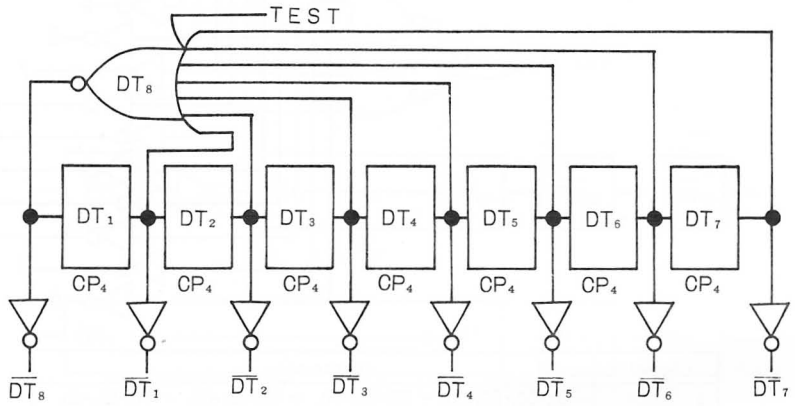


(Signal)	(Contents)
a	$\overline{DD}_1 \cdot \overline{DD}_2 \cdot \overline{DD}_3 \cdot \overline{DD}_4 + \overline{DD}_1 \cdot DD_2 \cdot \overline{DD}_3 + DD_1 \cdot DD_2 \cdot \overline{DD}_3 + DD_1 \cdot \overline{DD}_2 \cdot DD_3$
	$+ \overline{DD}_1 \cdot DD_2 \cdot DD_3 + DD_1 \cdot DD_2 \cdot DD_3 + \overline{DD}_1 \cdot DD_4 + DD_1 \cdot DD_4$
b	$\overline{DD}_1 \cdot \overline{DD}_2 \cdot \overline{DD}_3 \cdot \overline{DD}_4 + \overline{DD}_1 \cdot \overline{DD}_2 \cdot DD_3 + DD_1 \cdot \overline{DD}_2 \cdot DD_3 + \overline{DD}_1 \cdot DD_2 \cdot DD_3$
	$+ DD_1 \cdot DD_2 \cdot DD_3 + \overline{DD}_1 \cdot DD_4 + DD_1 \cdot DD_4$
c	$\overline{DD}_1 \cdot \overline{DD}_2 \cdot \overline{DD}_3 \cdot \overline{DD}_4 + DD_1 \cdot \overline{DD}_2 \cdot \overline{DD}_3 \cdot \overline{DD}_4 + \overline{DD}_1 \cdot DD_2 \cdot \overline{DD}_3 + DD_1 \cdot DD_2 \cdot \overline{DD}_3$
	$+ \overline{DD}_1 \cdot \overline{DD}_2 \cdot DD_3 + DD_1 \cdot DD_2 \cdot DD_3 + \overline{DD}_1 \cdot DD_4 + DD_1 \cdot DD_4$
d	$\overline{DD}_1 \cdot DD_2 \cdot \overline{DD}_3 + DD_1 \cdot DD_2 \cdot \overline{DD}_3 + \overline{DD}_1 \cdot \overline{DD}_2 \cdot DD_3 + DD_1 \cdot \overline{DD}_2 \cdot DD_3 +$
	$\overline{DD}_1 \cdot DD_2 \cdot DD_3 + \overline{DD}_1 \cdot DD_4 + DD_1 \cdot DD_4$
e	$\overline{DD}_1 \cdot \overline{DD}_2 \cdot \overline{DD}_3 \cdot \overline{DD}_4 + \overline{DD}_1 \cdot DD_2 \cdot \overline{DD}_3 + \overline{DD}_1 \cdot DD_2 \cdot DD_3 + \overline{DD}_1 \cdot DD_4$
f	$\overline{DD}_1 \cdot \overline{DD}_2 \cdot \overline{DD}_3 \cdot \overline{DD}_4 + DD_1 \cdot \overline{DD}_2 \cdot \overline{DD}_3 \cdot \overline{DD}_4 + DD_1 \cdot DD_2 \cdot \overline{DD}_3 + \overline{DD}_1 \cdot \overline{DD}_2 \cdot DD_3 + DD_1 \cdot$
	$\overline{DD}_2 \cdot DD_3 + \overline{DD}_1 \cdot DD_2 \cdot DD_3 + DD_1 \cdot DD_2 \cdot DD_3 + \overline{DD}_1 \cdot DD_4 + DD_1 \cdot DD_4$
g	$\overline{DD}_1 \cdot \overline{DD}_2 \cdot \overline{DD}_3 \cdot \overline{DD}_4 + \overline{DD}_1 \cdot DD_2 \cdot \overline{DD}_3 + DD_1 \cdot DD_2 \cdot \overline{DD}_3 + DD_1 \cdot \overline{DD}_2 \cdot DD_3$
	$+ \overline{DD}_1 \cdot DD_2 \cdot DD_3 + \overline{DD}_1 \cdot DD_4 + DD_1 \cdot DD_4$
9	$DD_1 \cdot DD_4$
8	$\overline{DD}_1 \cdot DD_4$
7	$DD_1 \cdot DD_2 \cdot DD_3$
6	$\overline{DD}_1 \cdot DD_2 \cdot DD_3$
5	$DD_1 \cdot \overline{DD}_2 \cdot DD_3$
4	$\overline{DD}_1 \cdot \overline{DD}_2 \cdot DD_3$
3	$DD_1 \cdot DD_2 \cdot \overline{DD}_3$
2	$\overline{DD}_1 \cdot DD_2 \cdot \overline{DD}_3$
1	$DD_1 \cdot \overline{DD}_2 \cdot \overline{DD}_3$
0	$\overline{DD}_1 \cdot \overline{DD}_2 \cdot \overline{DD}_3 \cdot \overline{DD}_4$

L.S.I. No. 4 -2

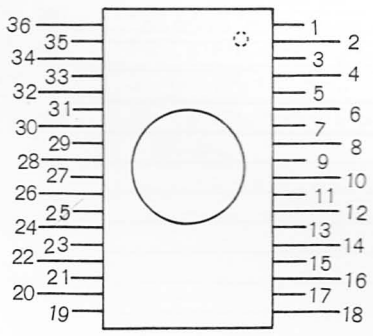






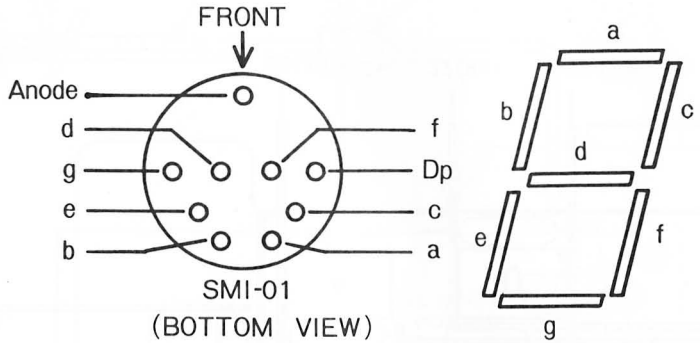
(Signal)	(Contents)
TC set	$\overline{TC}\cdot DT_7\cdot\overline{TEST}$
TC reset	$DT_7\cdot TC$
T_8	$TC\cdot DT_7$
T_{16}	$\overline{TC}\cdot DT_7$

(TOP VIEW)

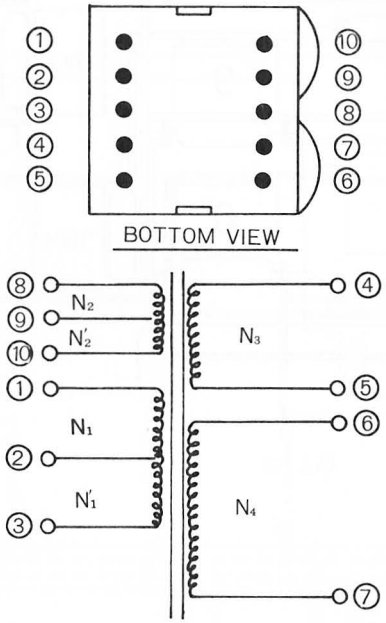


1	$\bar{5}$ or $\bar{e}$	0	13	$\overline{B_1\ set}$	I	25	TEST ※	
2	$\bar{6}$ or $\bar{d}$	0	14	$\bar{B}_{60}$	0	26	$\overline{T}_{16}$	0
3	$\bar{7}$ or $\bar{c}$	0	15	$\bar{A}_{32}$	0	27	$\overline{T}_8$	0
4	$\bar{8}$ or $\bar{b}$	0	16	$\overline{DT_7}$	0	28	$\overline{Tc}$	0
5	$\bar{9}$ or $\bar{a}$	0	17	$\overline{DT_6}$	0	29	$\bar{t}_4$	I
6	$\overline{A_1\ set}$	I	18	$\overline{DT_5}$	0	30	$\overline{DrA}$	I
7	CP_2	I	19	$\overline{DT_4}$	0	31		
8	CP_1	I	20	$\overline{DT_3}$	0	32	$\bar{0}$ or $\bar{D}_3$	0
9	$-V_{DD}$		21	$\overline{DT_2}$	0	33	$\bar{1}$ or $\bar{D}_2$	0
10	V_{SS} (GND)		22	$\overline{DT_1}$	0	34	$\bar{2}$ or $\bar{D}_1$	0
11	$-V_{DD}$		23	$\overline{DT_8}$	0	35	$\bar{3}$ or $\bar{g}$	0
12	$\bar{B}_4$	0	24	$\bar{A}_{60}$	0	36	$\bar{4}$ or $\bar{f}$	0

Pin Assignment

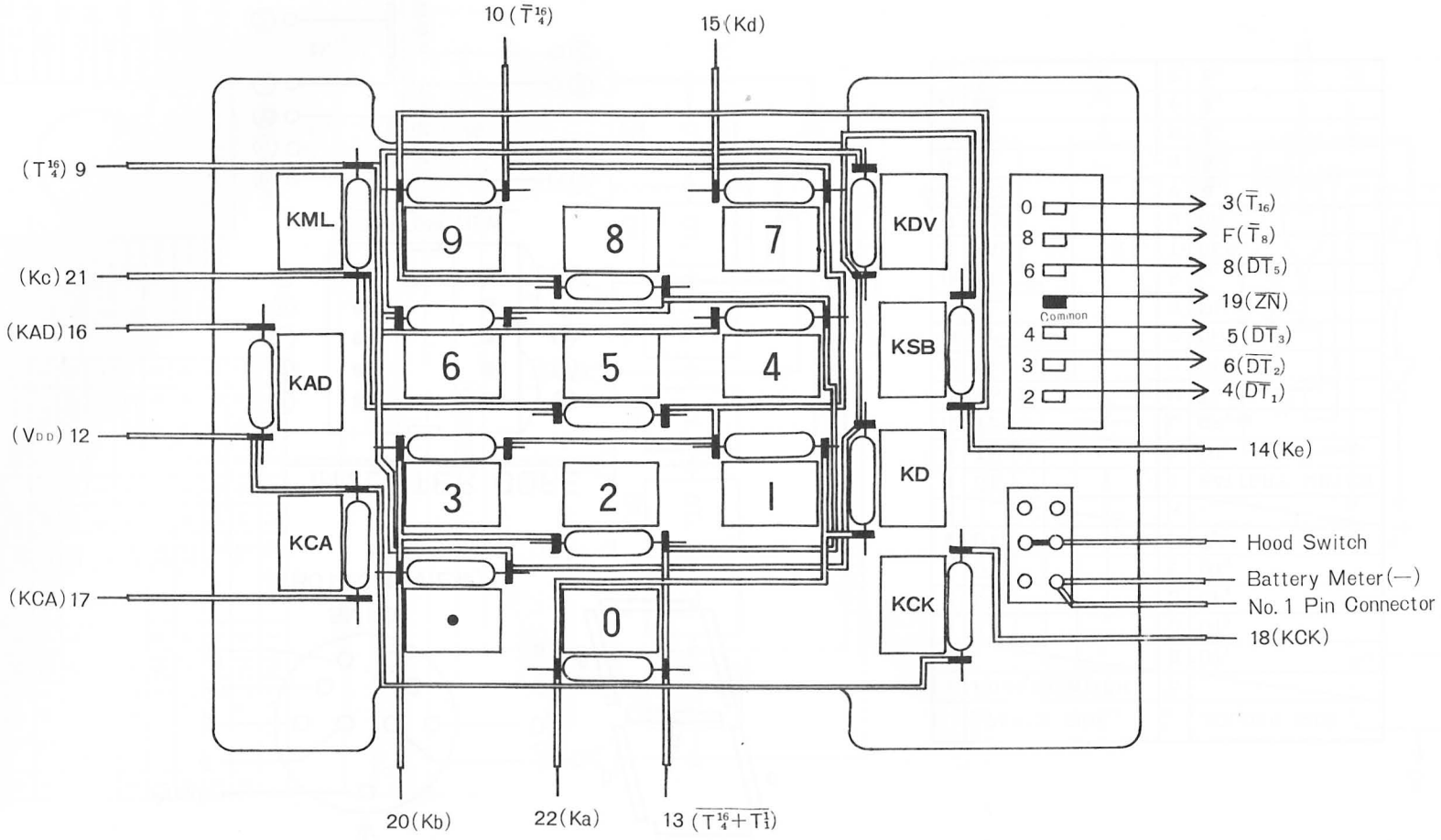


INVERTER CORE

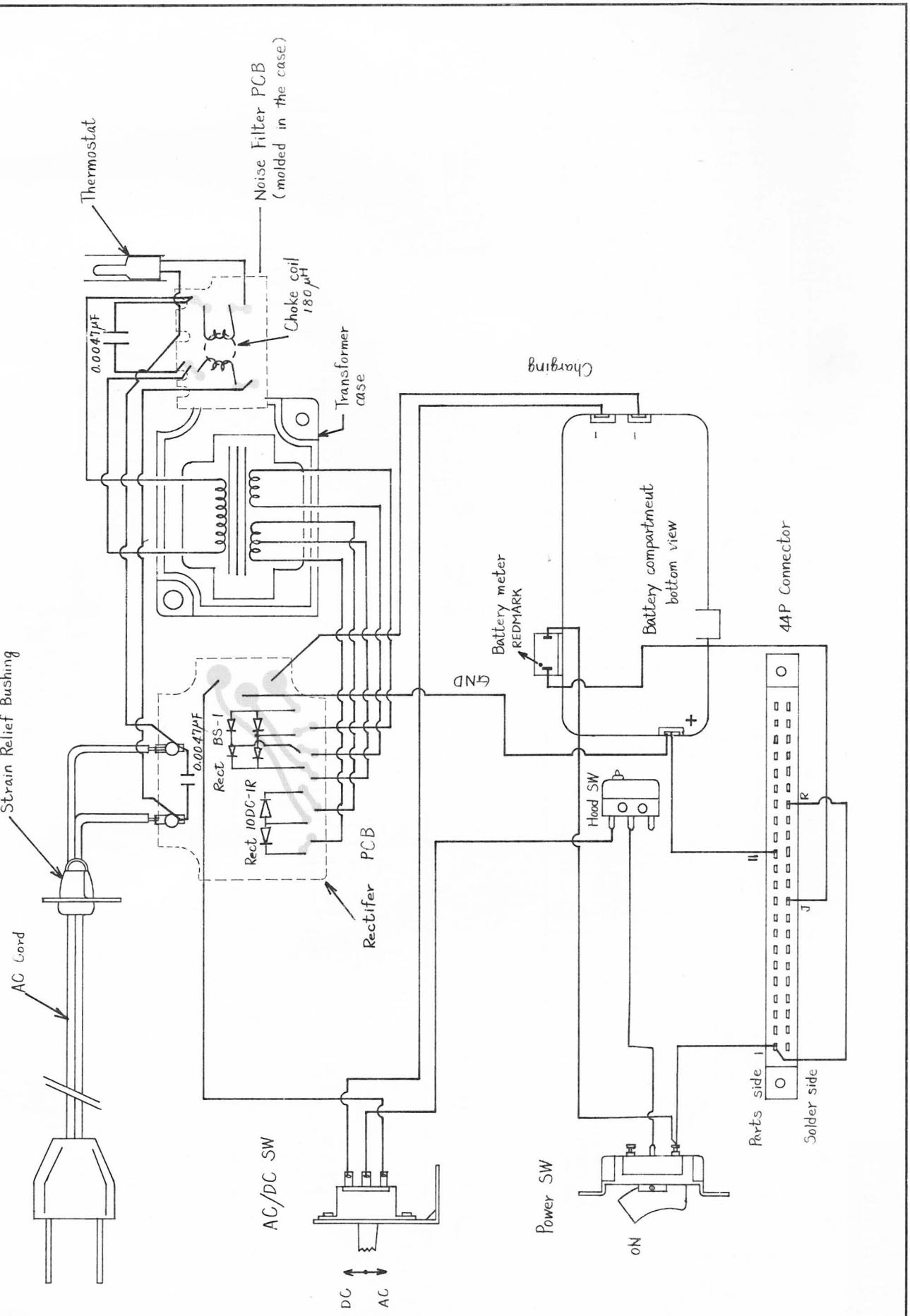


	PARTS SIDE		SOLDER SIDE
1	POWER•SWITCH	A	
2		B	$\overline{DT_4}$
3	$\overline{T_{16}}$	C	$\overline{DT_8}$
4	$\overline{DT_1}$	D	CP_2
5	$\overline{DT_3}$	E	$\overline{DT_6}$
6	$\overline{DT_2}$	F	$\overline{T_8}$
7		H	
8	$\overline{DT_5}$	J	BATTERY METER
9	$T_4^{16}(K)$	K	DT_7
10	$\overline{T_4^{16}}(K)$	L	CP_1
11	V_{SS}(GND)	M	$\overline{Tc}$
12	V_{DD}(−5V)	N	$\overline{OVF}$
13	$\overline{T_4^{16}}+T_1^1(K)$	P	$\overline{DrA}$
14	Ke	R	Power SW
15	Kd	S	$\overline{t_4}$
16	KAD	T	$\overline{FLR}$
17	KCA	U	$\overline{DP}$
18	KCK	V	$\overline{S_4}$
19	$\overline{Zn}$	W	$\overline{S_2}$
20	Kb	X	$\overline{S_1}$
21	Kc	Y	$\overline{S_3}$
22	Ka	Z	$\overline{S_5}$

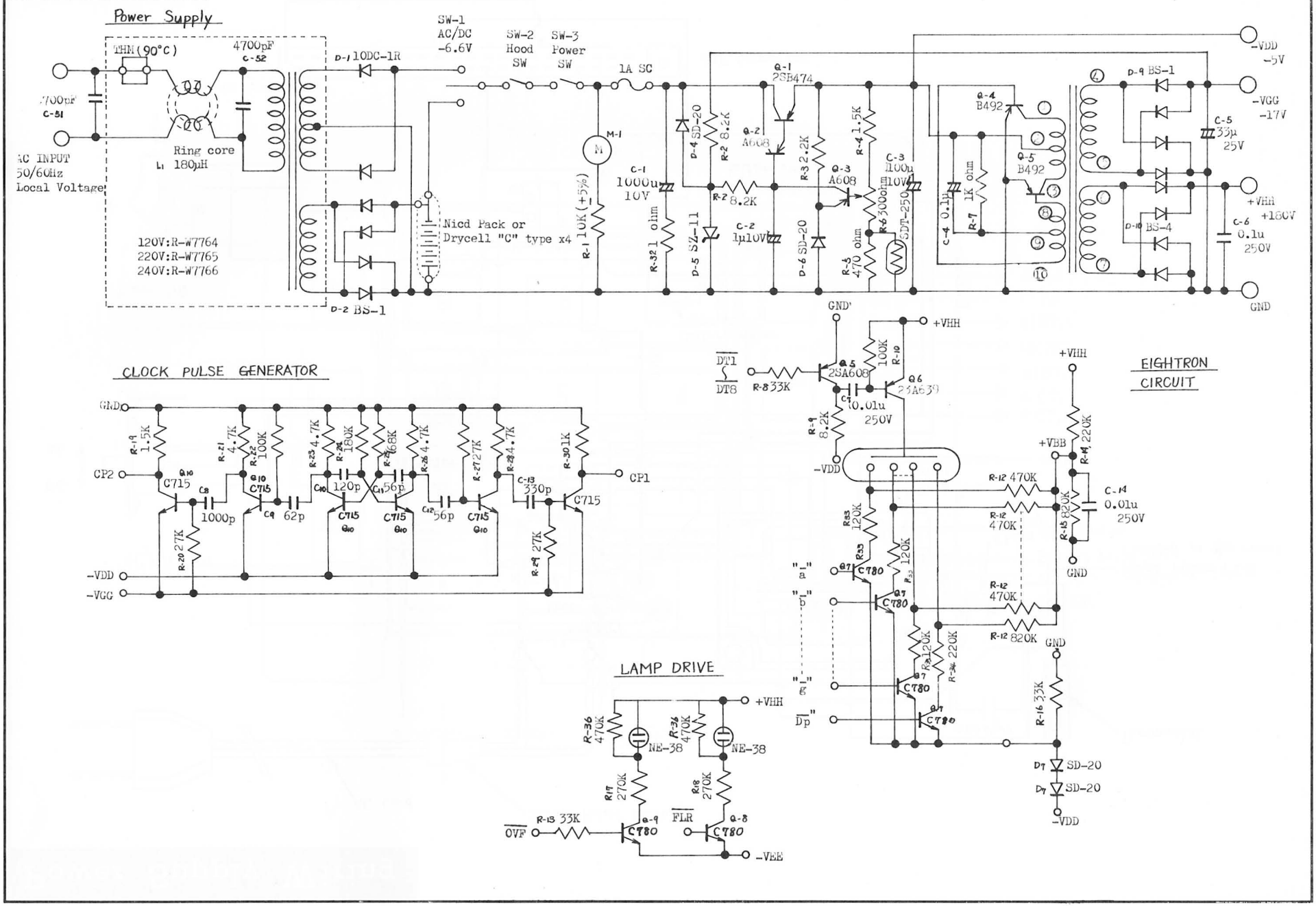
Key Board Connection



Power Supply Wiring



Schematic


Power Supply
THN(90°C)
4700pF C-52
4700pF C-51
AC INPUT 50/60Hz Local Voltage
Ring core L1 180μH
120V:R-W7764
220V:R-W7765
240V:R-W7766
D-1 10DC-1R
D-2 BS-1
SW-1 AC/DC -6.6V
SW-2 Hood SW
SW-3 Power SW
1A SC
M-1
R-1 10K(+5%)
Nicd Pack or Drycell "C" type x4
C-1 1000u 10V
R-32 1 ohm
D-5 SZ-11
D-4 SD-20
R-2 8.2K
C-2 1μ10V
D-6 SD-20
Q-1 2SB474
Q-2 A608
R-3 2.2K
Q-3 A608
R-4 1.5K
R-5 470 ohm
R-6 3000ohm
SDT-250
C-3 100u 10V
Q-4 B492
Q-5 B492
C-4 0.1μ
R-7 1K ohm
D-9 BS-1
D-10 BS-4
C-5 33μ 25V
C-6 0.1u 250V
-VDD -5V
-VGG -17V
+VHH +180V
GND
CLOCK PULSE GENERATOR
GND
CP2
CP1
-VDD
-VGG
R-19 1.5K
R-21 4.7K
R-22 100K
R-23 4.7K
R-24 180K
R-25 68K
R-26 4.7K
R-27 27K
R-28 4.7K
R-30 1K
R-20 27K
R-29 27K
C715
C8 1000p
C9 62p
C10 120p
C11 56p
C12 56p
C-13 330p
EIGHTRON CIRCUIT
DT1
DT8
R-8 33K
Q5 2SA608
Q6 2SA630
R-9 8.2K
R-10 100K
C7 0.01u 250V
+VHH
+VBB
R-14 220K
R-12 470K
R-12 820K
C-14 0.01u 250V
GND
R-33 120K
R-32 120K
R-34 220K
R-16 33K
Q7 C780
D7 SD-20
D7 SD-20
-VDD
LAMP DRIVE
+VHH
R-36 470K
NE-38
R-17 270K
R-18 270K
R-13 33K
OVF
FLR
Q-9 C780
Q-8 C780
-VEE

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